DOCUMENT RESUME

ED 075 546 UD 013 526

TITLE	The Accelerated Learning Experiment: An Approach to the Remedial Education of Out-of-School Youth. Final Report.
INSTITUTION	George Washington Univ., Washington, D.C. Social Research Group.
SPONS AGENCY	Manpower Administration (DOL), Washington, D.C.
PUB DATE	Nov 72
NOTE	150p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Academic Achievement; *Accelerated Programs; Dropout Rehabilitation; *Dropouts; Job Training; Manpower Development; *Program Evaluation; Remedial Instruction; *Remedial Programs; Urban Education; *Urban Youth
IDENTIFIERS	Job Corps; Missouri; Ohio; Pennsylvania

ABSTRACT

This paper reports the results of the experimental use of new remedial education techniques in three urban out-of-school Neighborhood Youth Corps programs. The use of these techniques and the evaluation of the results of these techniques constituted the Accelerated Learning Experiment. The research design called for study groups of 50 each in three different cities, using the education system and materials developed for the Job Corps Conservation Centers. Measures of academic achievement of enrollees were taken at the beginning of the program and again after three and six months. Bi-weekly reports on each student and program progress were prepared by the instructors. The three cities selected for the Accelerated Learning Experiment were: St. Louis, Missouri; Cincinnati, Ohio; and, Pittsburgh, Pennsylvania. Each of the sites was provided with the criteria for an "ideal" experiment, and arrangements were worked out in each city for the most feasible programs in relation to local problems and conditions. Teachers from all three cities were brought together in Pittsburgh in early February, 1968, and were trained by a Job Corps staff member in the use of the Job Corps materials. During the course of the Experiment, educational consultants visited the classrooms periodically to assist teachers with any problems that they had encountered. (Author/JM)

ED 075546

THE ACCELERATED LEARNING EXPERIMENT:

An Approach to the Remedial Education of Out-of-School Youth

Final Report

November, 1972

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UD 013526

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HIGHLIGHTS AND RECOMMENDATIONS

Earlier research has revealed that a large proportion of the Neighborhood Youth Corps out-of-school enrollees, even among those who had graduated from high school, were deficient in reading and arithmetic skills. Without these skills, their employability is severely limited. Thus, work-training programs, although valuable for providing credentials and for training the individuals in work habits and job skills, need to be supplemented by a program to bring inadequate reading and arithmetic skills up to a level necessary for successful performance in a responsible job.

Because existing remedial education programs in cities in which the research was being conducted had proved to yield limited success with these youth, a search was instituted for effective alternatives. This led to the institution of the Accelerated Learning Experiment, which provided for the experimental use and evaluation of new remedial techniques in NYC out-of-school programs. It was hoped that results of this experiment would develop valuable information relating to the effective remediation of the educational deficiencies of enrollees in the NYC out-of-school program, and might provide a model which could be used generally for out-of-school enrollees.

Rationale of the Experiment

Experience suggests that a number of factors are important to the achievement of an effective remedial education program. These factors, and their reflection in the Accelerated Learning Experiment, include the following:

--Enrollees may be expected to have a wide range of academic deficiencies. Even though they are approximately the same age, some school dropouts may be

functionally illiterate while others may be close to high school graduation. Similarly, some high school graduates may be critically deficient in reading skills while others may need upgrading of their arithmetic skills. An effective remedial education program, therefore, should be maximally flexible in order to accomodate students working at several levels of achievement.

--Many enrollees, particularly males, have negative attitudes towards school and schooling. Part of this negativism is associated with the enrollee's low estimate of his own ability to do school work, and with low thresholds of frustration and boredom. Educational material, therefore, should be neither so difficult as to frustrate nor so easy as to deny a sense of achievement, but should be just difficult enough to provide a challenge.

--The site of a remedial education program may be of crucial importance to its effectiveness. The negativism often attached to the standard school environment has been noted but the rejection of schooling by dropouts also frequently means that the enrollee considers schooling to be irrelevant to his concerns. Since the level of motivation to participate in further education is often low, it becomes essential that both the time and place for the classes be as convenient as possible. These psychological and physical considerations were reflected to the extent practical in the location of the Experiment's programs near NYC work sites and in the coordination of the class schedule with NYC work hours.

--A recent study has shown that certificated teachers are not essential to a learning situation involving the type of disadvantaged students and the educational materials being used in this Experiment. High school graduates, with proper motivation and personal qualities, can perform satisfactorily as teachers, and more

extensive teaching qualifications--with attendant recruitment difficulties--are not necessary. Therefore, personal qualifications of teachers were stressed more than academic qualifications.

--It is believed that the educational, employment and social problems of the youth are interrelated. The Experiment attempted to coordinate education and counseling either by having the same person serve as both counselor and teacher or by placing the teacher and counselor within the same organizational unit.

--Males have been found to be more resistant than females to conventional teaching methods. The academic deficiencies of males are correspondingly more severe and the needs of males for an effective educational program are more urgent. The education of male enrollees, accordingly, received primary emphasis in the Accelerated Learning Experiment.

Design of the Experiment

The research design called for study groups of fifty each in three different cities, using the education system and materials developed for the Job Corps Conservation Centers. The NYC director in each city took responsibility for administering the program. The Social Research Group was responsible for conducting the research and providing training and consultation. Measurements of academic achievement of enrollees were taken at the beginning of the program and again after three and six months. Bi-weekly reports on each student and program progress were prepared by the instructors.

The three cities selected for the Experiment were St. Louis, Missouri; Cincinnati, Ohio; and Pittsburgh, Pennsylvania. Each of the sites was provided with the criteria for an "ideal" experiment, and arrangements were worked out in each city for the most feasible programs in relation to local problems and conditions.

Teachers from all three cities were brought together in Pittsburgh in early February, 1968, and were trained by a Job Corps staff member in the use of the Job Corps materials. During the course of the Experiment, educational consultants visited the classrooms periodically to assist teachers with any problems that they had encountered.

Results

During a fifteen-month period, over 300 enrollees participated in the Experiment, with useable evaluative information on 277 of them who had terminated from the program or were still enrolled. The data suggested the following conclusions:

--An educational program organized along the lines of the Accelerated Learning Experiment can achieve significantly better results than conventional programs, particularly with male enrollees. Considering only those programs that followed the design of the Experiment, about 40 percent of the males and 60 percent of the females participated in the Experiment for at least three months with good attendance and with most of them making significant progress. These results compare favorably with almost total lack of success achieved by other remedial education programs with males and limited success with females. It, thus, can be concluded that programmed instruction taught in classes conducted near the work site by non-certificated teachers can provide significant assistance to some out-of-school NYC enrollees.

--One program (Pittsburgh), which met only twice a week and used a centrally located classroom rather than one near the work site, achieved significantly poorer results. This suggests that the convenience of the classroom and the frequency of class meetings are important variables influencing the success of the program.

-- A substantial proportion of the enrollees neither showed any interest nor achieved noticeable progress, indicating that the design of the Accelerated Learning Experiment was not comprehensive enough to serve the needs of the majority of the enrollees. Various ways in which the program might be supplemented are discussed below.

--The Job Corps materials, while adequate as basic educational materials, need to be supplemented in three ways: (a) the teacher needs to know some additional approaches to remedial instruction for helping the student whose learning problems are not solved by the programmed instruction, (b) the materials need to come alive--the routine approach of programmed learning bores many of the students, and (c) the immediate relevance of the educational program to job and life situations needs to be established. Efforts need to be made to develop the educational tasks in relation to specific job and life situations encountered by the enrollees during their initial adjustment to the world of work.

Recommendations

It should be recognized that many enrollees are easily discouraged and have difficulty mastering an academic task. Their attention spans tend to be short and the educational goals, therefore, must be modest if there is to be any reasonable prospect of their being achieved. At the same time, the educational channels should be kept open and efforts continually made to motivate enrollees and to make it possible for them to continue their education.

For these reasons, three levels of remedial education should be offered to trainees with tie-ins made between the various levels so that enrollees can progress from one level to another. The first level should be specifically related to the job the enrollee is to perform and should have the limited objective of

improving his performance in a specific job. It should be the trainee's first full-time assignment for a three to six week period prior to his first work assignment and, in addition to the three R's, should include relevant work procedures or work samples, family financial management, personal counseling to prepare each enrollee for employment, and career orientation and planning.

The second level of education should be directed toward the remediation of educational deficiencies of the trainee and should, in general, follow the design of the Accelerated Learning Experiment except that more emphasis should be placed on making the educational tasks relevant to work and on supplementing the Job Corps programmed learning materials.

The third level of remedial education, concentrated preparation for the GED test, should be available for all those who are adequately motivated and whose educational achievement can be raised in a reasonable time to the level of passing the GED examination. The Job Corps GED materials can be used effectively for this educational component.

Research of the out-of-school NYC youth who were enrolled in urban programs showed that almost no dropouts returned to high school and very few of the male dropouts effectively participated in the limited remedial education programs offered under typical NYC programs. By starting with an educational experience which is specifically related to a job, it may be possible to show the relevance of education to work and encourage a greater proportion of the enrollees to participate in the higher level educational programs.

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I

Introduction

This paper reports the results of the experimental use of new remedial education techniques in three urban out-of-school Neighborhood Youth Corps programs. The use of these techniques, and the evaluation of the results of these techniques, constituted the Accelerated Learning Experiment (ALE). This experiment was a part of a longitudinal study of the effectiveness of selected urban, out-of-school NYC programs conducted by the Social Research Group of The George Washington University.[1] The need for special studies of the remedial education component of NYC programs was apparent in view of the fact that a high proportion of the enrollees, even among those who had graduated from high school, were found to be deficient in reading and arithmetic skills. With these deficiencies, their employability is severely limited. Thus, work-training programs, although valuable for providing credentials and for training the individual in work habits and job skills, need to be supplemented by a program to bring inadequate reading and arithmetic skills up to a level necessary for successful performance in a responsible job.

Initially, a comparative study of contrasting educational programs in Durham, North Carolina, and Pittsburgh, Pennsylvania, was undertaken. These two programs differed primarily in their use of conventional school resources. The Pittsburgh program relied entirely on the resources of the city school system;

[1]Conducted under contract numbers 81-09-66-19 and 41-7-004-9 between the Manpower Administration of the Department of Labor and the Social Research Group of The George Washington University.

whereas the Durham program was entirely separated from the public school system. The initial promise of this special study was not fulfilled, because both the Durham and the Pittsburgh programs ran into difficulties that seriously reduced the usefulness of data from these sites.

The importance of education, on the one hand, and the lack of effective remedial education component, on the other, led to the Accelerated Learning Experiment. In the ALE, research results--both those of the Social Research Group's NYC studies, and those from related research--were reviewed and a rationale, based on these results, was developed. An experimental design, based on the rationale, was then devised and implemented. It was hoped that the experimental use and evaluation of new remedial education techniques would indicate the extent to which the ALE could provide models of effective remediation of the educational deficiencies of NYC out-of-school enrollees.

Rationale of the Experiment

Studies of the educational needs of disadvantaged youth have indicated that a number of factors are important to the achievement of an effective remedial education program. These factors, and their reflection in the Accelerated Learning Experiment, include the following:

1. Males have been found to be more resistant than females to conventional teaching methods. Accordingly, primary emphasis in the Experiment was placed on educating male enrollees.
2. It is believed that the educational, employment, and social problems of the youth are interrelated. The Experiment attempted to coordinate education and counseling either by having the same

person do both the counseling and teaching or by placing the teacher and the counselor within the same organizational unit.

3. Many enrollees, particularly males, have negative attitudes towards school and schooling. Part of this negativism is associated with the enrollee's low estimate of his own ability to do school work, and with low thresholds of frustration and boredom. Educational material, therefore, should be neither so difficult as to frustrate nor so easy to deny a sense of achievement, but should be just difficult enough to provide a challenge. Programmed learning plus diagnostic procedures for placing the student at his proper level appear to offer the best prospect for achieving the goal of avoiding frustration and giving the student a sense of progress. This combination of techniques allows the student to be placed at a level appropriate to his needs and permits him to work at his own pace.

4. Enrollees, although they may be approximately the same age, may be expected to have a wide range of academic deficiencies—from functional illiteracy to near readiness for high school graduation. The educational program must maximize flexibility by being able to include within the same class students working at several different levels of achievement.

5. The site of a remedial education program may be of crucial importance to its effectiveness. The negativism often attached

to the standard school environment has been noted; but the rejection of schooling by dropouts also frequently means that the enrollee considers schooling to be irrelevant to his concerns. Since the level of motivation to participate in further education is often low, it becomes essential that both the time and place for the classes be as convenient as possible. The psychological and physical considerations were reflected to the extent practical in the location of the Experiment's programs near NYC work sites and in the coordination of the class schedule with NYC work hours.

6. A recent study[1] has shown that certificated teachers are not essential to a learning situation involving the type of disadvantaged students and the educational materials being used in this Experiment. High school graduates, with proper motivation and personal qualities, can perform satisfactorily as teachers, and more extensive teaching qualification--with attendant recruitment difficulties--is not necessary.

The research design and the way it was implemented in the three research sites selected for the ALE (Cincinnati, Durham, and Pittsburgh) are described in the next chapter. The ALE was designed originally for a six-month period of operation. At the end of that time, after a review of the six-months results, changes were made and the ALE was continued for another nine months. The experiment was concluded by a three-day workshop attended by

[1]Greenleigh Associates, Inc. Field and Test Evaluation of Selected Adult Basic Educational Systems. (New York: September, 1966)

administrators and teachers from the three research sites, public school personnel, research personnel, educational consultants, Job Corps teachers and trainers, and representatives from the Department of Labor, Office of Education, and other interested organizations.

Chapter III reports the results of the ALE for the first six months, and Chapter IV reports comprehensive results covering both the first and second periods of the Experiment. Chapter V reports the results of the workshop. Conclusions based on all the sources of information, particularly as they contributed to developing a model for effective remedial education programs, are discussed in Chapter VI.

II

Design and Implementation of the Experiment

On the basis of the rationale, discussed in the preceding chapter, criteria for an "ideal" remedial education experiment were developed. These criteria provided guidelines to the NYC directors who were responsible for local arrangements in the three sites selected for the Experiment—Cincinnati, Pittsburgh, and St. Louis. These criteria also outlined the kinds of information that the Experiment could be expected to produce. This chapter describes the development of the Experiment from its rationale to its initiation in the three sites.

Criteria of an "Ideal" Educational Program

Desirable features of an education program that could be expected to be effective with disadvantaged youth included the following:

1. Educational Materials

   After investigating several methods of programmed learning, it was decided to use, without change for the first six months, the system developed for the Job Corps Conservation Centers. This system was designed to serve students from beginning reading and math through the 7.5 grade level. Teachers were encouraged to supplement but not to eliminate or replace any of the materials or procedures. The reasons for the selection of the Job Corps materials were:

   a. It is a complete system including graded materials, placement tests coordinated with the materials, and

standardized training for teachers.

b. It has a reading and mathematics curricula.

c. It permits entry into the program at any time.

d. Students can begin school work at different levels and can proceed at their own pace.

e. Persons used as teachers do not need to have teaching certificates.

As might be expected, the initial Job Corps educational materials were found to be inadequate for preparing students to take the General Educational Development Test for obtaining a High School Equivalence Certificate. Midway through Phase I, the Job Corps provided GED materials, which were distributed to the experiment sites. It now appeared that all levels from beginning reading to preparation for the high school equivalence examination were adequately covered by the materials.

2. Qualifications of Teachers

Personal qualifications of teachers were stressed more heavily than academic qualifications. It was intended that teachers be interested in the experiment and able to relate well to disadvantaged youth; they should be mature individuals with well established verbal and arithmetic skills. It was deemed preferable that they be more than 25 years of age and have completed two years of college, although exceptions were made on an individual basis when it was apparent that the person was in all other respects qualified for the job.

3. Location and Schedule of Classes

Classes were to be conducted at or near the work site as part of the regular work week and were to meet five days a week for two hours a day. The class time was to be divided into three parts: a forty-five minute period for reading and a forty-five minute period for mathematics separated by a period of thirty minutes for counseling and curriculum enrichment. Teachers were to use this time creatively and be responsive to the needs of the class.

Research Design

The research design called for studies in three different cities using Experimental groups of approximately 50 each with replacements for terminated participants. Measurements of enrollees were to be taken at the beginning of the program, and again at selected intervals. Baselines were established for comparison purposes through use of data available on the educational experience of a large number of other NYC out-of-school program enrollees. Bi-weekly reports on both student and program progress were to be submitted by the instructors. The information produced by the Experiment was derived from the following research instruments:

Career Counseling Interview[1]

Efforts were to be made to demonstrate to the enrollees that the educational program was considered important by the administrators

[1]A copy of the Career Counseling Interview form is attached as Appendix D.

of the NYC program and had their full support. Before the classroom experience began, a Career Counseling Interview was to be held with each participant to help him plan his future and increase his motivation for education.

This interview, which also was used for motivational and planning purposes, was to serve as a measure of attitudinal change. It was to be administered before the program started and at the end of six months.

California Achievement Test

During the first six months of the research, the reading and arithmetic parts of this standard test were to be administered to enrollees when they entered the Accelerated Learning Experiment, at the end of three months, and at the end of six months. In the subsequent period, the tests were to be administered at six month intervals. The results were to provide a measure of academic progress.

Job Corps Tests

These tests are an important part of the Job Corps programmed instruction system are are used for initial diagnosis and placement and to determine readiness for movement from one unit to another in the system.

Bi-weekly Reports on Enrollees' Progress[1]

Bi-weekly reports by instructors provided information on the attendance, attitude and progress of each enrollee who participated in the Experiment.

[1]A copy of the report form is attached as Appendix E.

Bi-weekly Classroom Reports[1]

Each instructor also provided a bi-weekly report on his activities and problems.

Organization of the Experiment

The NYC director took the responsibility for administering the Accelerated Learning Experiment, hiring and supervising instructors, time scheduling and other problems. The Social Research Group was responsible for conducting the research and providing the Job Corps instructional materials, the services of an educational consultant, and the coordination of the training of teachers. The only constraint on the NYC program administrators was that the agreed-upon research design had to be followed and the Job Corps instructional materials had to be used without change for six months so that they could be tested adequately. Within these limitations, the local programs were encouraged to be innovative in their use of the time devoted to the program and in the development of supplementary materials.

Initiation of the Experiment

Three cities were selected for the experiment: Cincinnati, Ohio; Pittsburgh, Pennsylvania, which conducted two programs; and St. Louis, Missouri. Each of the sites was provided with the list of criteria for an "ideal" experiment,[2] and then arrangements were worked out in each city for the most feasible programs in relation to local problems and conditions.[3]

[1] A copy of the report form is attached as Appendix F.

[2] A copy of the list of criteria is attached as Appendix G.

[3] A discussion of the problems of the research design which evolved during the course of the Experiment is attached as Appendix H.

Teachers from all three cities were brought together in Pittsburgh in early February and were trained by a Job Corps trainer in the use of Job Corps materials. The Job Corps trainer together with an educational consultant, Dr. James Aven from The George Washington University,[1] visited all three sites during the first three months of the Experiment to assist the teachers with any problems they had encountered during the beginning phases of the program. Additional visits from consultants to all three cities were scheduled as needed.

The specific design for each city is described below:

a. Cincinnati - A community center within walking distance of several work sites was selected for the educational program and a systematic effort was made to increase the number of males assigned to those work sites. The first class met February 26, 1968.

b. Pittsburgh - Two Experimental groups were established in Pittsburgh. One, the Hill City group, met in a community center. It used NYC counselors as teachers and got under way on March 4, 1968. The other group was set up to meet in a city school building and used school system teachers. It was planned that comparisons would be made between these two programs and with the regular school program for NYC enrollees using conventional teaching methods.

[1]Dr. Aven supervised the Greenleigh Associates field test of selected adult basic educational systems and worked with the District of Columbia School System in developing educational programs.

c. St. Louis - A hospital work site was selected to provide classroom space for the Experimental group which was composed of all the NYC enrollees assigned to that work site. The first class in the Accelerated Learning Experiment met on March 27, 1968. Since St. Louis has had a well-organized program using tutors and considerable programmed learning material, it was decided to use a group receiving tutorial instructions as the Comparison group. The Comparison group, also receiving instruction at a hospital work site, consisted of the enrollees assigned to that site.

Implementation of the Educational Program

The implementation of the design varied greatly from one research site to the next. In Cincinnati, the original design was followed quite closely. Classes of 12 or 13 enrollees, a majority of whom were males, met five mornings a week for two hours. Terminees were replaced regularly. The instructors had experience as NYC counselors but were not certificated teachers.

In Pittsburgh, two overriding considerations resulted in certain adaptations of the design. Enrollees were scattered in work sites all over the city and many had to travel long distances to attend class. Furthermore, the work assignments of Pittsburgh enrollees permitted them to attend class only two half-days per week instead of daily. The combination of the time-consuming and costly travel from scattered work sites and the exigencies of the work assignments made daily class sessions expensive and impractical. The result was that three groups of enrollees met only twice per week for three hours at one centrally located classroom. One large group of 31 males met in the

morning and two smaller groups of girls met in the afternoon. Enrollees received eight hours pay per week for six hours of attendance to compensate for travel time and expense. Instructors had NYC counseling experience but did not serve as counselors for the ALE enrollees whose counselors were located at their individual work sites. The diversity of work sites and counselors made replacing terminees very cumbersome.

The second Experimental group in Pittsburgh finally began at Connelley Vocational and Technical High School on April 22, 1968. Twenty-three enrollees met in two classrooms, again on a twice per week basis for three-hour periods. Regular Connelley staff taught math and reading for ninety-minute periods. The arrangements for compensating the students were the same as at Hill City, and the problems of transportation, counseling and replacement of terminees were identical. The program operated for only about seven weeks until the end of the school year in June and then was discontinued when there were insufficient funds for teachers during the summer period. The brevity of the Connelley Experiment resulted in a lack of useable data, so this second program in Pittsburgh was not included in our analysis.

In St. Louis the enrollees met in small groups five days per week at a large hospital work site classroom. The nature of the work site resulted in a larger number of female enrollees. Two instructors and the regular work site counselor provided counseling which was incorporated within the instruction time. Six hours per week were devoted to instruction in reading and math and one and one-half hours were used for group counseling.

A group of more advanced students who were preparing for the General Educational Development (GED) test met for two hours, three days per week at the same work site with another instructor. Budgeting problems made for difficulty in replacing terminees, and enrollees were compensated for only part of their classroom time.

Table 1 summarizes the implementation of the Experiment at each research site.

Table 1

INITIAL CHARACTERISTICS, ACCELERATED LEARNING EXPERIMENT BY SITE

Characteristics	Cincinnati	Pittsburgh	St. Louis
Initial enrollment	62	54	30
Percent male	71%	57%	27%
Classroom site	Community center	Community center	Hospital
Distance of classroom from work sites	Walking distance	Transportation needed	Classes at work site
Instructional personnel	2 NYC counselors	6 NYC counselors	2 NYC counselors
Classes met:			
Number of days per week	5	2	5
Number of hours per week	10	6	7½
Date ALE began	2/26/68	3/4/68	3/27/68

At the time the Experiment began, Cincinnati came closest to realizing the arrangements visualized in the "ideal" criteria in that education was provided near the work site on a daily basis, and the study group numbered more than fifty participants, of which 71 percent were male. There were strong indications, based on research observations and teachers' and administrators' reports, that the characteristics of the enrollees at each site were affected by the nature of the work sites served by the classrooms, and by other considerations. In Cincinnati, where efforts were made to locate the classrooms near work sites with a larger number of male enrollees, the work sites involved work assignments that did not require higher levels of reading and computational skills.

The Pittsburgh group possessed advantages so far as the size of the group and the percentage of males were concerned, but had the least desirable classroom location and time schedule. The Pittsburgh male enrollment included a nucleus of males who had not only dropped out or been expelled from the regular school system but also had been expelled from the NYC classes at Connelley.

The St. Louis ALE group had good features in regard to location and scheduling of classes, but the group itself was quite small, and only 27 percent were male. The hospital work site at which the ALE classroom was located led to a much higher proportion of female enrollees.

III

The First Six Months

The first six months of the Accelerated Learning Experiment were run according to agreed-upon arrangements in each site. As described in the preceding chapter, these arrangements varied by site, particularly in the matters of class scheduling and classroom location. In this first period of the Experiment, results included information from the bi-weekly reports of instructors, and reading and arithmetic scores from the California Achievement Test. These results are reported in this chapter.

Attendance

From 30 to 40 percent of the original ALE enrollment (depending on the site) stayed in the Experiment throughout the first six-month period (see Table 2). While factors other than the ALE itself contributed to the retention of ALE subjects, it is of interest that Cincinnati--the site that most closely reflected "ideal" program criteria--reported the highest retention rate (40 percent). Pittsburgh, on the other hand--which was farthest from "ideal" in terms of class schedules and location--had the lowest retention rate (30 percent).

Replacements for ALE enrollees who had terminated in the first six months were sought in each site. The first-period experience of these replacements could range from a few days to nearly six months, depending upon when the replacement occurred. The retention rate of replacement enrollees was somewhat higher than that of original enrollees and ranged from 40 percent (in Pittsburgh) to 61 percent (in St. Louis).

Daily attendance rates were highest in Cincinnati (78 percent), and lowest in St. Louis (65 percent).

Table 2

ATTENDANCE IN THE FIRST SIX MONTHS OF THE ACCELERATED LEARNING EXPERIMENT
MALE AND FEMALE STUDENTS IN THREE SITES

Attendance	Cincinnati Male	Cincinnati Female	Cincinnati ALL	Pittsburgh Male	Pittsburgh Female	Pittsburgh ALL	St. Louis Male	St. Louis Female	St. Louis ALL
	Number			Number			Number		
Initial enrollment	44	18	62	31	23	54	8	22	30
Replacements and additions	22	16	38	6	4	10	3	20	23
Total enrollment	66	34	100	37	27	64	11	42	53
Completed first period: Initial enrollments	30%	67%	40%	23%	43%	31%	13%	41%	33%
Number enrolled at end of first six months	21	20	41	10	11	20	3	21	24
Attendance rate, first six months[a]	78%	79%	78%	60%	82%[b]	70%[b]	55%	68%	65%

[a]Sum of days attended by initial and replacement students divided by sum of days attended and days absent.

[b]Data unavailable for seven of the 23 female enrollees for first three weeks of enrollment.

In each site, the proportion of original female enrollees who remained in the Experiment through the first six months was higher than the comparable proportion of male enrollees—37 percent higher in Cincinnati, 20 percent higher in Pittsburgh, and 28 percent higher in St. Louis. All told, 51 percent of all original female enrollees in the combined ALE groups stayed in the Experiment

throughout the first six months. This proportion was very significantly larger[1] than the comparable proportion for male enrollees (25 percent).

The attendance rate of male and female ALE subjects was substantially the same in Cincinnati--78 percent and 79 percent, respectively. In the other sites, the attendance rate of male enrollees was less than that of female enrollees--22 percent less in Pittsburgh, and 13 percent less in St. Louis. These results indicated that the Cincinnati ALE program was as successful—in terms of daily attendance—with young men as with young women, even though--judging from attendance in the other ALE sites and from the results of other studies--these young men were apt to be more difficult to involve in remedial education than disadvantaged young women.

Termination Conditions

One of the most striking aspects of ALE results in the first six months was the large proportion of enrollees who terminated from the NYC (and the Experiment) in this period. These terminations not only reduced the amount of

[1] "Very significant" is reserved in this report for differences that should be attributed to chance no more than one time in 100. "Significant" is reserved for differences in which the confidence level does not exceed .05 (i.e., the results should be attributed to chance no more than 5 times in 100).

The significance of differences between percentages has been determined through an adaptation of the t-test formula. This adaptation is described in the monograph: Vernon Davies, Rapid Method for Determining the Significance of the Difference Between Two Percentages. Institute of Agricultural Science, Washington State University Stations Circular 151 (revised July, 1962).

useable information in the ALE but also implied that NYC remedial education programs must often operate within time limits that are too short to permit effective remediation.

As indicated in Table 2, from 60 to 69 percent of the original ALE enrollment (depending on the site) terminated from the Experiment before the first six months were completed. From 30 percent to 59 percent of the replacements for these terminees (again, depending on the site) also left the Experiment in the first period. Enrollees in the Experiment--both original and replacement--were not necessarily at the beginning of their NYC enrollments when they joined the Experiment; and it is likely that the proportion of terminations in the first six months was higher in the ALE groups than would be the case in groups made up of NYC entrants.[1]

According to program reports, 44 percent of the male subjects in the combined original ALE groups left the Experiment (and the NYC) for activities that were consonant with program objectives--employment, preparations for employment, and military service (see Table 3). An additional 5 percent of these subjects left the Experiment because they had achieved its educational objectives (passed the GED or gotten a high school diploma). All told, then, approximately half of the male subjects who terminated in the first six months could be considered to have had successful NYC outcomes.[2] The ALE may have contributed to these outcomes. It is unlikely, however, that the ALE (or, indeed, any educational

[1]In Phase II of the Retrospective study, when most NYC enrollees had completed their NYC enrollments, 41 percent of the male subjects and 22 percent of the female subjects reported NYC experience of six months or less.

[2]It should be borne in mind that termination conditions were based on program reports and not on follow-up information.

program) could have made substantial academic contributions in less than six months; and, in any case, the time in the ALE was too short to provide measurement results.

Thirty percent of the male subjects in the combined original ALE groups terminated in the first six months primarily because the program failed to hold them. These subjects were reported by their instructors to be lacking in motivation or to have failed to adjust. Sometimes these enrollees were terminated by the program because of absenteeism, and sometimes these enrollees quit the program on their own initiative. It is of interest that approximately the same proportion of female enrollees in the combined original ALE groups also failed to adjust to the program. These results indicated that the ALE program was generally as successful in holding male subjects as in holding female subjects.

Table 3

TERMINATION CONDITIONS, MALE AND FEMALE SUBJECTS WHO DID NOT COMPLETE FIRST SIX MONTHS, BY TIME OF ENTRY INTO ALE[a]

Termination Conditions	Male Subjects			Female Subjects		
	Original N=62	Later N=18	Total N=80	Original N=32	Later N=19	Total N=51
Passed GED, HS diploma	5%	0%	4%	9%	11%	9%
Left NYC for employment, school, other training program, or military service	44	11	37	17	26	20
Moved, transferred within NYC, "completed" NYC	13	22	15	26	32	28
Health, personal or family circumstances	3	0	2	23	11	19
Jailed	5	6	5	0	0	0
Failure to adjust, lack of motivation, absenteeism, quit	30	61	37	26	21	24
TOTAL[b]	100%	100%	100%	101%	101%	100%

[a]See Appendix Table 1 for site termination conditions

[b]In this and subsequent tables, percentages have been rounded and do not always sum to 100%.

In Cincinnati and in Pittsburgh there were no indications that participation in the ALE might have contributed to adverse terminations. In these sites 16 percent and 17 percent, respectively, of all original ALE enrollees terminated in the first six months because of maladjustment to the program (the NYC and/or the ALE).[1] These percentages were smaller than roughly comparable percentages derived from an earlier study.[2] In St. Louis, on the other hand, 30 percent of the original ALE enrollees were reported to have terminated through maladjustment to the program. Compared to the combined Cincinnati and Pittsburgh results, noticeably[3] more St. Louis original enrollees in the Experiment terminated because of maladjustment. A number of factors in addition to the ALE experience in the several sites were probably reflected in these results. The small number of enrollees involved, as well as the very close association between work site and ALE in St. Louis, makes it difficult to reach more definite conclusions at this point.

Significantly more of the replacement male subjects (61 percent) than of the original male subjects (30 percent) left the Experiment in the first six

[1]Attendance in a remedial education program is a compulsory feature of out-of-school NYC programs, and absenteeism can result in termination. See Appendix Table 1 for site termination conditions in Cincinnati and Pittsburgh.

[2]See " A Study of Terminated Enrollees in Three Urban Out-of-School Neighborhood Youth Corps Programs," Table 14, page 31. In the Pittsburgh City program, approximately 26 percent of the termination conditions connoted program maladjustment. In the Pittsburgh HWA program the comparable percentage was 25, and in Cincinnati, 23.

[3]In this report, "noticeable" is reserved for confidence levels between .05 and .10. See Appendix Table 1 for St. Louis termination conditions.

months through failure to adjust or related conditions. The maladjustment of replacement male subjects was marked in each site--half of the 14 replacement male subjects in Cincinnati, all three of the replacement male subjects in Pittsburgh, as well as the single replacement male subject in St. Louis left in the first six months because of maladjustment. The small numbers of subjects involved prevented definite conclusions. These results suggested, however, that "being in on the ground floor" may be an important factor in the continued participation of male subjects in programs of this kind.

California Achievement Test Scores

Progress in reading and arithmetic, as measured by the appropriate California Achievement Tests (CAT), constituted an important part of the study design. The usefulness of these results was somewhat reduced, however, by turnover in the ALE groups which, in turn, reduced the number of participants for whom complete test results were available. The research design called for test results on entrance into the ALE group, after three months in the ALE group, and after six months in the ALE. Many of the original ALE participants as well as many ALE replacements were not in the Experiment long enough to have complete test results. Although lack of time in the ALE was the major reason for incomplete CAT results, difficulties in completing tests for otherwise qualified participants were also factors to some extent.

In the combined ALE groups, 53 participants--21 males and 32 females--at the time of entering the Experiment, had completed, on the average, 8.9 school grades. Most of these enrollees were Negro (see Table 4), and the male enrollees were slightly younger (13.1 years), on the average, than were the female enrollees (18.8 years).

Table 4

MALE AND FEMALE ENROLLEES BY RACE, SCHOOL GRADE COMPLETED AND AGE AT ENTRY INTO ALE

Variables	Male N=21	Female N=32	Total N=53
Percent white	5%	16%	11%
Percent Negro	95	84	89
Mean school grade completed	8.9	8.9	8.9
Mean age at entry into ALE	18.1	18.8	18.5

At the end of the first six months of the Experiment, 17 males and 27 females had test results that reflected their reading achievement. Of these, three males and seven females had only initial and three-month scores. Twenty males and 28 females had test results that reflected their arithmetic achievement. Of these, three males and eight females had only initial and three-month scores. Comparison of final CAT scores with initial CAT scores indicated that female subjects were significantly more likely to have made measurable progress[1] in both reading and arithmetic than were male subjects (see Table 5). Two-thirds of the female subjects, and 36 percent of the male subjects, made measurable progress in reading; and 54 percent of the female subjects, as compared with 25 percent of the male subjects, made measurable progress in arithmetic. Both of these differences were

[1]The standard error of the CAT is .4, and gains greater than .4 have been counted as progress.

significant at the .05 level of confidence. In reading, the extent of progress was often quite striking in that most of the male subjects who progressed, and more than half of the female subjects who progressed, made gains of a year or more. Progress in arithmetic was more apt to be under one year.

An interesting aspect of the CAT score comparison was the sizeable percentage of subjects whose six-month scores were lower than their initial scores. These results clearly indicated the crucial role played by attitude and motivation in academic performance (including tests of academic performance). Some students evidently did their best on entry into the ALE, but were so apathetic or indifferent in the six-month test situation that their scores sometimes dropped by as much as a year and a half. The reverse situation, of course, might also be reflected to some extent in the scores indicating progress. In the latter case, however, the productive attitude as well as enhanced abilities might properly be counted as progress associated with the ALE.

Table 5[a]

ENROLLEES WITH USEABLE TEST SCORES
BY SEX AND ACHIEVEMENT IN READING AND ARITHMETIC

Progress[b]	Reading		Arithmetic	
	Male N=17	Female N=27	Male N=20	Female N=28
	Percent		Percent	
Progress:				
.5 through .9 years	6%	30%	15%	36%
1.0 through 1.4 years	12	22	10	14
1.5 through 1.9 years	12	7	0	4
2.0 through 2.4 years	6	0	0	4
2.5 years or more	0	7	0	0
Subtotal, progress	36%	66%	25%	58%
No progress:				
Decrease	47%	19%	30%	29%
Same	12	11	30	4
Increase of .4 years or less	6	4	15	11
Subtotal, no progress	65%	34%	75%	44%
TOTAL	101%	100%	100%	102%

[a]See Appendix Table 1 for site termination conditions.

[b]Progress is difference between earlier and later CAT score--in most cases, between initial and six-month score.

Noticeably more of the male subjects (47 percent) than of the female subjects (19 percent) scored lower in reading at the end of six months than they had at the beginning. In arithmetic, approximately the same percentages of male

and female subjects made lower scores (30 percent, and 29 percent, respectively). Relatively more of the male subjects (75 percent) than of the female subjects (44 percent), however, made little or no progress in arithmetic. These results indicated, in general, less effectiveness with male subjects. At the same time, in the light of the known difficulties associated with the effective involvement of male NYC enrollees in remedial education, the results indicated some success.

Site data indicating academic progress in the first six-month period were quite fragmentary (see Table 6). Except in St. Louis, where the single male subject with useable CAT scores progressed in reading, male subjects were uniformly less apt to make academic progress in each site. It was of interest, however, that the male-female differential was less in Cincinnati than in either of the two other sites.

Table 6

MALE AND FEMALE ENROLLEES WITH USEABLE TEST SCORES, BY SITE AND ACHIEVEMENT IN READING AND ARITHMETIC

	Cincinnati		Pittsburgh		St. Louis	
	Male N=13	Female N=12	Male N=7	Female N=10	Male N=1	Female N=10
Reading						
Number with useable scores	10	12	6	5	1	10
Percent progressing[a]	40%	50%	17%	80%	100%	80%
Arithmetic						
Number with useable scores	13	12	6	7	1	9
Percent progressing[a]	23%	42%	33%	71%	0%	67%

[a]Subjects whose scores improved by more than .4 years in the six-month period.

Instructors' Ratings

Instructors provided two general ratings for each ALE enrollee in their bi-weekly reports: a rating of attitude towards the program, and a rating of progress in learning. Both ratings used a five-point scale ranging from "1"--Excellent--to "5"--Unsatisfactory. Female subjects, in general, were rated as having better attitudes and as making better progress (see Table 7). Ratings from Pittsburgh were "worse",[1] on the average, than ratings from the other sites.

Table 7

MALE AND FEMALE ENROLLEES BY SITE AND TEACHER'S BI-WEEKLY RATINGS DURING SIX-MONTH PERIOD

Teacher's Bi-Weekly Ratings	Cincinnati		Pittsburgh		St. Louis	
	Male	Female	Male	Female	Male	Female
Mean Rating-Attitude	2.95	2.15	3.5	2.6	1.6	2.2
Mean Rating-Progress	3.2	2.35	3.8	3.0	2.6	2.7

Other Site Results

Much of the data produced by the Experiment in the first six months can most usefully be reported in narrative, rather than statistical, descriptions. The small number of ALE subjects who stayed in the Experiment throughout the first six months, and the consequent inappropriateness of statistical summaries,

[1] Mean average ratings were, in each case, higher in Pittsburgh. In terms of the scales used, however, the lower the rating the better the attitude or progress.

dictates this course.

Cincinnati

The 25 ALE enrollees who stayed in the Experiment throughout the first six months were severely disadvantaged with respect to their school experience. Both male and female enrollees in this group averaged 8.7 grades completed in school; 10 of the 13 male enrollees had left school for behavioral reasons (didn't like school, were in trouble, or were expelled); five of the 12 female enrollees had left school for similar reasons and the rest had dropped out for family or personal reasons (illness, pregnancy). These educational backgrounds implied remedial education problems that were as grave, or graver, than those of NYC out-of-school enrollees in general.[1] The relatively better showing of the Cincinnati ALE group--compared to other ALE groups--thus represented achievements despite severe educational problems.

Initial CAT tests indicated that more of the male enrollees (67 percent) than of the female enrollees (25 percent) were functionally illiterate (grade levels of 5.0 or below). As we have seen, male enrollees had as high attendance rates as female enrollees. Attendance data showed, in fact, that enrollees with low scores--both male and female--had somewhat higher attendance rates than high scorers. As might be expected, enrollees who scored above the 5.0 grade level at the outset of the Experiment were more apt to make measurable progress than were the low scorers. Even though the number of enrollees involved was too small to

[1] In Phase II of the Retrospective study the average school grade completed of NYC enrollees was 9.7; behavioral reasons were associated with 35 percent of the male, and 45 percent of the female, enrollees' dropouts; and situational dropout reasons only were given by 35 percent of the female enrollees.

warrant definite conclusions, the Cincinnati results suggest that, in this site, the Experiment achieved some success in the remedial education of disadvantaged young people. The severity of educational problems in the Cincinnati ALE group suggested, in addition, that the yardstick of academic progress (more than .4 years in six months) may have been too crude to reflect some of the academic achievement of this program.

Pittsburgh

The six-month "survivors" of the Pittsburgh ALE group were even fewer than in Cincinnati--seven male enrollees and ten female enrollees. Test results were even more partial. Information indicated that these enrollees--like those in Cincinnati--had severe educational handicaps. The average school grade completed was 8.7 for both male and female enrollees. More than half of the male enrollees, and 50 percent of the female enrollees, reported that they left school for reasons that suggested maladjustment to school--didn't like school, didn't get along with teachers, expelled, and the like. The other half of the female enrollees left for family or personal reasons--four because of pregnancy, and one to take care of her mother.

The average attendance rate of the female enrollees was 25 percent higher than that of the male enrollees; and, among enrollees with useable CAT scores, female enrollees were more apt to have made measurable academic progress than were male enrollees. Although the initial Pittsburgh ALE group had a 50:50 sex ratio, all of the male enrollees--it will be recalled--met in one class group, while the female enrollees met in two smaller and separate groups. These and

other Pittsburgh ALE arrangements were not conclusively associated with Experiment results. It was nevertheless of interest that Pittsburgh gave no indication of having overcome the male:female differentials with respect to remedial education.

St. Louis

The small initial ALE enrollment in St. Louis compounded the difficulties of getting useable results in this site. Of the 30 initial ALE enrollees in this site, only 10 were still in the Experiment at the end of six months. This group was augmented by one female enrollee who entered the GED class directly,[1] and all except one of the group were female. The educational level of the St. Louis group was somewhat higher than that of the other groups--the male enrollee had completed 10 grades, and the female enrollees averaged 9.3 grades. None of the St. Louis enrollees in this "survivor" group reported that he or she had left school for reasons that suggested maladjustment to school. Progress was most frequently reported in the St. Louis group. These results suggested that the ALE arrangements in St. Louis provided effective remedial education. The educational problems of the St. Louis group were less extensive than those in the other sites, however, so that it is difficult to gauge the relative effectiveness of the St. Louis program on the basis of six-month results.

Summary

Terminations from the Experiment--even though many of them were consonant with NYC program objectives--not only reduced the number of ALE subjects but

[1] In St. Louis, a separate GED preparation group began but used other instructional materials for the first three months until the Job Corps materials became available. At that point, bi-weekly reports for GED class enrolleed were supplied regularly for the duration of the Experiment.

implied that the duration of NYC remedial education was often a function of factors unrelated to educational achievement. Effective educational remediation may thus often entail the establishment of post-NYC educational participation for the inadequately remediated terminee.

There were no indications that the ALE had been more of a factor in termination than other NYC remedial education programs. On the contrary, there were some indications--particularly in Cincinnati--that the Experiment had effectively involved enrollees with severe educational deficiencies. Such enrollees--early dropouts from school, often maladjusted to the school environment and often male--are most in need of educational remediation and least apt to become involved with conventional "dropout" schooling.

IV

Later Developments and Results

The Accelerated Learning Experiment had two phases: an initial period of six months, described in the preceding chapter; and a second period of nine months in which modifications indicated by the initial experience could be instituted in the several sites. This chapter reports the changes that occurred in the second ALE period, and evaluative results for the entire course of the Experiment. Nine case studies illustrate those results and conclude the chapter.

Modifications in the Programs

The ALE program in Cincinnati experienced two changes several months after the end of the first six month period: counseling of the enrollees, which had been provided separately, was taken over by one of the teachers in order to provide a closer relationship between the counseling and teaching functions, and the arrangements were terminated for paying enrollees the regular NYC hourly rates for attending classes. There was an expansion of decentralized classrooms to a number of other larger NYC work sites in Cincinnati. These, however, were staffed, supervised and supplied with instructional materials by the Cincinnati Board of Education. Insufficient data are available to reach any conclusions about the results of the establishment of additional work site classrooms in Cincinnati.

In Pittsburgh, the Accelerated Learning Experiment as it existed during the first six months was discontinued. Instead, the Pittsburgh Board of Education assumed responsibility for staffing and supervising four decentralized NYC classrooms located in different areas of the city. Three of the four classrooms used instructional materials supplied by the Pittsburgh Board of Education; the fourth,

the Kay Boys' Club site, used the Job Corps programmed materials originally provided for the Accelerated Learning Experiment. In response to dissatisfaction with the schedule of three-hour classes twice per week, during the first six months, all classes met daily for two hours.

The ALE program in St. Louis continued unchanged in the second phase of the Experiment.

Pittsburgh Phase 2 Results

Initial arrangements had included the testing of Pittsburgh enrollees at the four sites with the Metropolitan Achievement Test[1] upon entry into and exit from the program. These arrangements were unproductive, however, in that test scores at entry were available for only a few of the enrollees, and despite frequent requests, no further test scores were provided.

Data on enrollment and attendance at the four Pittsburgh sites constituted the principal quantitative information from Pittsburgh in the second ALE period. There was considerable variation in total enrollment and percent of male enrollees (see Table 8). The best attendance rate (56 percent) occurred in the Downtown site, where only 29 percent of the enrollees were males. At the Kay Boys' Club site, where the male enrollment was 69 percent, the attendance was 50 percent--higher than at Northside (which had about the same sex ratio) and East Liberty with only 45 percent males.

[1] A standard achievement test used by the Pittsburgh Public School System.

Table 8

CHARACTERISTICS AND ATTENDANCE, ALE PHASE 2, PITTSBURGH SITES

Characteristics	Downtown	East Liberty	Northside	Kay Boys' Club
Number enrolled	150	78	83	134
Percent male enrollees	29%	45%	71%	69%
Attendance rate[a]	56%	42%	40%	50%

[a]Days attended/possible days of attendance

Compared to the attendance of Pittsburgh enrollees during the first six months (see Table 2), attendance was generally lower in Pittsburgh in Phase 2. These results indicated that the Pittsburgh program modifications were not followed by improved attendance.

The relatively high attendance rate at the Kay Boys' Club site--the only site using Job Corps materials and one in which male enrolleed predominated--suggested that this system of remedial education was certainly as successful as the school system's program. Many other variables were undoubtedly involved in these results, however, and the quantitative results of the second phase of the ALE in Pittsburgh thus did not permit firm conclusions.

In addition to quantitative results, Phase 2 of the Pittsburgh ALE produced some interesting qualitative results in the form of teachers' observations.

In general, the Job Corps instructional materials were found to be satisfactory if supplemented in various ways to be discussed later. Teachers using materials supplied by the Board of Education evinced the desire to use the Job Corps materials, particularly the GED, because they felt that they were specifically designed to provide what the enrollees would need to pass the GED tests, and would give more uniform preparation than the Board of Education materials.

Pittsburgh ALE teachers also reported that the decentralization of the NYC educational centers was advantageous for the enrollees because it increased convenience and accessibility, but it led to a certain amount of isolation for the teachers. Several of the fringe benefits of teaching in a regular school setting were sacrificed: the opportunity to talk and exchange ideas with other teachers about the day-to-day problems of teaching and particularly about any students with special problems; and the opportunity for mutual support and for cooperation on difficult tasks among teachers whose experience and fields of education vary, and from administrative staff, guidance counselors and other personnel usually available in a larger urban high school.

The isolation of the teachers placed in a decentralized site should be compensated for by supportive activity on the part of the school system and the NYC counselors and administrative staff.

Evaluative Results

When data collection in the Accelerated Learning Experiment was ended in April, 1969, the Experiment had run for 15 months and had involved some 277 enrollees in addition to those involved only in the Phase 2 Pittsburgh programs. The length of ALE experience and the kinds of information indicating ALE outcomes varied considerably between enrollees. In looking at the outcomes of the Experiment, therefore, three broad categories were used in order to reflect as many enrollees as possible. These categories and the information that they involved were:

1. Academic Achievement indicated by CAT results, as follows:
   a. Outstanding Progress--reading and/or arithmetic grade levels improved by 1.0 grades, or more.
   b. Moderate Progress--reading and/or arithmetic grade levels improved by .6 to 1.0 grades.
   c. Minimal Progress--reading and/or arithmetic grade levels improved by .4 to .6 grades.
   d. Initial academic progress after which enrollee lost interest.
2. Attitudinal Achievement indicated by:
   a. Good attendance and attitude for six months or more (no discernible academic progress).
   b. Good attendance and attitude, in program less than three months and therefore could not be tested.
   c. Initial good attendance after which enrollee lost interest.

3. No Progress indicated by:

   a. Irregular attendance and lack of academic progress or no reports of attitudinal improvement (in ALE two to six months).

   b. In ALE less than two months and no serious effort to learn.

Female enrollees were very significantly more apt than male enrollees to produce some evidence of achievement; and, furthermore, female enrollees were significantly more apt to produce test results that indicated academic achievement (see Table 9). These indications that disadvantaged young women were more apt to profit from additional educational opportunities were in line with the findings of other parts of the longitudinal NYC research. In view of the generally poor participation of male enrollees in NYC remedial education programs, one of the most striking aspects of the ALE results was the indication that nearly half of the male subjects made some discernible progress during the period of their ALE participation.

In two of the ALE sites--Cincinnati and St. Louis--male enrollees were as apt as female enrollees to have made discernible progress while in the Experiment (see Table 10). Male enrollees were very significantly less apt to have made progress in Pittsburgh. Although the number of enrollees in the various ALE site groups was often too small to warrant drawing hard-and-fast conclusions, both composite and site results indicated that the educational procedures used in the Experiment had achieved a measure of success with male as well as with female enrollees.

Table 9

OUTCOMES IN THE ACCELERATED LEARNING EXPERIMENT, ALL MALE AND FEMALE ENROLLEES

Outcomes	Male N=130	Female N=147	Total N=277
	Percent	Percent	Percent
Academic Achievement			
Outstanding progress	2%	6%	4%
Moderate progress	3	9	6
Minimal progress	6	8	7
Progress, then lost interest	6	5	5
Subtotal, academic achievement	17%	28%	22%
Attitudinal Achievement			
Good, in ALE 6 months or more	9	8	8
Good, in ALE less than 3 months	18	21	20
Good, then lost interest	3	8	6
Subtotal, attitudinal achievement	30%	37%	34%
No Progress			
In ALE 2-6 months	27	20	23
In ALE less than 2 months	28	14	21
Subtotal, no progress	55%	34%	44%
TOTAL	102%	99%	100%
Not categorized (number)[a]	(3)	(1)	(4)

[a]Incapacitated by physical or mental illness.

Table 10

ALE OUTCOMES BY SITE AND SEX OF SUBJECT

Outcomes	Cincinnati M N=74	Cincinnati F N=48	Pittsburgh M N=36	Pittsburgh F N=30	St. Louis M N=20	St. Louis F N=69
	Percent		Percent		Percent	
Made Progress in Remedial Education						
Evidenced by test results	14%	27%	0%	35%	16%	16%
Evidenced by attitude reports	30	21	14	21	37	38
Made Progress and Then Lost Interest	10%	19%	3%	3%	16%	14%
Made No Discernible Progress	47%	33%	83%	41%	32%	32%
TOTAL	101%	100%	100%	100%	101%	100%
Not categorized (number)[a]	(1)	(0)	(1)	(1)	(1)	(0)

[a]Incapacitated by mental or physical illness.

In other NYC research, the success of enrollees in the program was associated with age in that older enrollees were more apt to do well in their work assignments and to impress their counselors and supervisors as being well-adjusted to work training.[1] These indications of success in the NYC were also positively associated with employment success in a post-NYC period, as was level

[1]See "The Cincinnati Clerical Co-Op: A Formal Skill Training Program," page 60.

of educational achievement. These results indicated that age might be a factor in ALE success. An investigation of the relationship of age to ALE outcomes, however, indicated no clear-cut effect (see Table 11). The average age of enrollees--both male and female--who progressed in ALE was very similar to the average age of those who made no progress. Among male enrollees, those who progressed and then lost interest were oldest, on the average; while female enrollees in this category were youngest, on the average.

Table 11

ALE OUTCOMES AND AGE, MALE AND FEMALE ENROLLEES

Outcomes	Mean Years of Age[a]	
	Male	Female
Made Progress		
Test results	18.2	18.5
Attitude and attendance	18.2	18.8
Progressed, then lost interest	18.9	18.3
Made no discernible progress	18.0	18.5

[a]Age on entry into ALE.

Case Studies

To illustrate some of the factors involved in the Experiment, several case studies are included in this report. Sources of information are the Career Counseling Interviews, the California Achievement Test scores and the teachers' bi-weekly reports on each enrollee.

Case 1 illustrates a successful outcome: how the needs of a female enrollee, whose education has been interrupted, were being met by the Experiment which served as the link between her initial enrollment status and eligibility for a clerical co-op program. Case 2 reports on a male enrollee whose performance in the Experiment was highly rated and who left after eight months to take full-time employment.

Case 1: Female, age 20, dropped out of school after eighth grade because she was sick and throught she had tuberculosis. Was older than rest of , having repeated first and fourth grades. From a large family in Appalachia, migrated to Cincinnati and lived there alone. Her initial CAT reading score was 7.2 and the math score was 7.0. At the end of five months, her reading score was 8.0, a gain of eight months, and her math score was 8.1, a gain of 11 months. Eight months after enrolling, the teacher's report stated, "Progress continues to be quite good. According to enrollee's previous counselor, she is testing very high in clerical skills. Consequently, enrollee will probably be transferred to clerical co-op as soon as she successfully completes the GED program."

Case 2: Male, age 19, who dropped out in the tenth grade because of "sickness in family - economic reasons." In response to the question in the Career Counseling Interview about what he would like to get out of the Experiment, his response was, "would like to improve reading, possibly my high school equivalency. Am good in math."

His initial CAT gave him a score of 5.1 in reading and 6.4 in math. Eight months later his reading score had moved to 6.4 while his math score had remained the same. During his enrollment, a speech problem was detected and arrangements made for an examination and speech therapy. His attendance was excellent, and he received consistently favorable reports from his teacher. When he terminated at the end of eight months for permanent employment, he indicated a desire to continue his education.

Aside from the gains made in academic achievement, a number of enrollees gained side benefits of attitudinal change through participation in the classroom. Cases 3 and 4 are examples of some of the more obvious attitudinal changes among male enrollees.

Case 3: Male, age 17, who completed sixth grade and left because "I was in some trouble and they took me out of school." His initial, three-month and six-month CAT reading scores were all below the third grade level, but there was a 15 point gain in raw scores. His CAT math scores progressed from 5.1 to 6.4 on the three-month test, and then inexplicably dropped back to 5.1 on the six-month test. His attendance was excellent but he presented considerable disciplinary problems in the classroom. By the end of the first six-month period, the teachers reported that he probably made the most noticeable change in attitude while in the Experiment of all the enrollees. "He became less of a discipline problem almost overnight, after counselor solicited his assistance in securing refreshments for the class one morning." Both his attitude and work improved, as a result.

Case 4: Male, age 18, who left school after completing the 11th grade because of family finances and because "guys didn't take to me." His initial, three-month and six-month CAT reading scores were 7.1, 5.9, and 6.8, and his initial, three-month and six-month math scores were 6.8, 7.2, and 6.5, indicating no academic progress during the first six-month period. He tended to do well in reading but to avoid math. Early in his enrollment he needed much attention, caused discipline problems in class and it was necessary to send him out of class two days to keep order. Teachers reported a gradual improvement in progress and attitude and less aggressive and attention-seeking behavior. He received some special tutoring in math and responded well. During his seventh month in the program, he began attending night school, and terminated after ten months in the Experiment to take a permanent job with the Kroger Company as a trainee. His first contact with the company came about through one of the company personnel who was doing some volunteer work with the Experiment enrollees.

Cases 5 and 6 show the difficulty in evaluating the results of the Experiment because of the variety of reasons for which an enrollee might stop coming to classes. Case 5 made outstanding progress for six months but was then reassigned to another job within the NYC. Our data collection techniques did not provide any information about whether she continued to improve her academic

skills. Case 6 left after about two months to return to school and while the ALE program may have helped motivate him to made the decision, we do not know how long he stayed in school or how much he was able to learn.

Case 5: Female, age 20, who left school to get married and was one of the few NYC enrollees who asked permission to attend classes. She was frequently reported to be one-half hour or more early for class and had continuous high ratings on attitude and progress. Her teacher reported that she "apparently sets realistic goals and has ability to follow through." Her initial, three-month, and six-month scores in math were: 7.3, 7.8, and 8.5. Her initial, three-month, and six-month scores in reading were: 7.0, 7.5, and 8.1. Her attendance in class was terminated when she was transferred to another work site outside the classroom area by her counselor at the end of six months, but she was still hopeful of getting a diploma.

Case 6: Male, who dropped out after ninth grade because "I just didn't go back," but said he wanted to graduate. His initial CAT reading score was 6.1 and his math score was 7.7. Entering the program in mid-September, he was not tested again because in mid-November he re-entered full-time day school.

Keeping the level of motivation high enough so that attendance and academic progress were maintained was a constant problem with many enrollees. The most tangible incentive used to encourage attendance was payment for time spent in the classroom at the same rate as the work assignment. One site provided only partial payment for classroom time, a second provided full hourly compensation, and the third paid for one hour extra for each of the two days spend in class to compensate for travel costs. Case 7 illustrates the part played by financial incentives in encouraging attendance and progress. Though it summarizes only one enrollee's NYC educational experience, it is representative of several very similar situations which occurred when compensation for attendance was terminated after the Experiment had been in operation for nine months.

Case 7: Male, age 19, who completed eighth grade and left school because "I kept missing a lot of days so I just quit." He reported in the Career Counseling Inte-view that he wants to finish high school. His initial and three-month CAT reading scores were 5.9 and 6.8, and his math scores were 7.1 and 7.6. During the first three months in the program the teacher reported that his attendance was excellent and he was working hard. At the end of three months he began working with the GED materials, was reported coming to class early and maintaining his attendance and excellent work habits. At the end of six months, the teacher mentioned that he had evinced interest in preparing for entry into an apprenticeship program. Shortly after, the hourly pay for attendance was terminated, and his teacher reported that he was reacting to the loss of pay. Within a few weeks, he was terminated from the program because of excess absenteeism.

For some of the male enrollees, hourly compensation for attendance was not sufficient to promote diligence in academic work, nor did attention and encouragement from the teacher seem to be effective. Cases 8 and 9 indicate the experience of one male enrollee whose initial reading score was low and another male enrollee whose initial scores were fairly high. Both were apparently low in motivation and teachers' efforts had little effect.

Case 8: Male, age 18, who completed eighth grade, and left school because, "Teachers really bugged me. Couldn't get along--they would've put me in jail because I would have hit one of them. I have a bad temper--explode easily." He said that he would "like to complete school but not public school--I'll come here all the time. Here you get more attention."

Early in his enrollment, his attendance rate was 100 percent but the teacher reported that "G.'s mind is elsewhere" and that he had severe reading problems and was rather limited intellectually. After two months, his attendance was poor and he "wastes much of time. We have been unable to help him achieve sufficient motivation." Five months after entering his attendance had improved but he was reported as wasting much time just stalling on the math program. He completed the first six months and when the NYC educational program was changed in format and he was assigned to another classroom staffed by Board of Education teachers, he attended sporadically for a few weeks and then terminated.

Case 9: Male, age 19, who completed the ninth grade and dropped out because he said he couldn't adjust to the school situation and the attitudes of the administration. He evinced an interest in finishing college and was characterized as bright and able by the Experiment teachers. His initial and three-month

CAT reading scores were 7.9 and 10.3, showing a great gain. His initial math score was 9.2. His teachers reported that he was doing better than anyone else in class without making too much effort but was bored and disruptive. Dropped from the class for refusal to cooperate, he was reinstated at his own request, but continued to perform below what was considered his potential. At the end of the first six months he was scheduled to take the GED test but failed to appear on the date set for testing, and then terminated from the NYC for permanent employment.

Although these case studies end on a rather discouraging note, a good summarization of the meaning of participation in the Experiment for a large proportion of the enrollees appears in the words of an enrollee telling about her experience:

> I think myself that this is really a good program, because with this kind of classroom situation you can learn and say and tell if you're not a brain. You can express yourself more freely. You can feel more at ease and not have to feel dumb and feel real bad and embarrassed in front of students who are real smart in almost all their studies and ideas. But most of all I think if you try your best and try to help the teacher get it in your head this isn't just a place to mess off but a place to start learning without just being passed on and on from one class to another.

V

The ALE Workshop

The Experiment concluded with a three-day workshop[1] held in Washington, D.C., in April, 1969. Teachers and administrators from the three ALE sites, representatives from the Manpower Administration of the Department of Labor and from the Job Corps, and other persons involved in remedial education for disadvantaged youth participated in the workshop.[2]

The workshop was organized into discussion sections focused on problem areas that were generally recognized or had become salient in the course of the Experiment.[3] Additional issues emerged from the discussion groups, and from the general discussion sessions that followed the reports of the discussion groups. The purpose of the workshop was to develop realistic guidelines for the effective provision of remedial education to NYC out-of-school enrollees. These guidelines, the resultants of ALE experience, participant expertise, and the discussion process, are reported in this chapter.

1. <u>The remedial education program should be decentralized and classrooms should be located within large work sites or in proximity to a cluster of work sites</u>.

In making arrangements for space and equipment for a remedial education program, the first consideration is location of space convenient to the work site. What would be regarded as an ideal classroom situation usually is limited severely

[1]The workshop was made possible through Office of Economic Opportunity funds provided under contract number C99-2058.

[2]See Appendix A for listing of workshop participants.

[3]See Appendix B for outline of workshop, and Appendix C for outline of discussion topics.

by what is available without cost and in a convenient location. There is a distinct advantage to locating classrooms near the work sites; it is more conducive to good attendance rates than a single central location because the cost and time involved in transportation between classroom and work site are minimized. Decentralization alone does not solve the attendance problem, but centralization exacerbates it.

Another advantage of locating the classroom at or near the work site is that it is removed from the regular school atmosphere. A third benefit is the resultant potential for buidling a closer relationship between the work site and the educational component.

There are some disadvantages to decentralization. Decentralized sites do not have the supportive services available in the regular school sites, and this is especially difficult for beginning teachers who may need additional guidance and support. If classrooms are at some distance from where administration and supportive services are located, there may be problems in distribution of materials and communication among staff members. Decentralization may result in non-coverage of those work sites which have few enrollees and are located some distance from any of the larger sites. However, none of these problems are insurmountable and may be considerably easier to cope with than maintaining attendance among many enrollees with difficult transportation problems.

2. The space required by the classroom is closely related to the number and characteristics of the enrollees it serves. Space selected should be adequate to allow for unconventional seating arrangements and greater than usual

storage and display facilities for materials.

Optimum classroom space is dependent upon the number in the class. Either the number which it has been decided the class will serve should determine the size necessary for the classroom or the space available must be considered when deciding the size of the class. NYC enrollees' deviation from the regular school population necessitates innovation and deviation from the usual classroom. It is recommended that the classroom be large enough so that students will not be crowded but small enough so that the instructor can reach each student easily in order to provide special attention. Other recommended features are that the seating arrangements be in a circular or U-shape or around a large table to create an informal atmosphere and promote opportunity for students to become acquainted. Individual space at the tables should allow for enough elbow room since enrollees may be irritated by bodily contact. Some small individual tables or desks around the fringes of the room will serve those who need temporary quiet and privacy, and a blackboard should be available at the back or side of the room. For restless enrollees, desirable features are a cooling-off corner with reading material, and access to some recreation facilities in an adjoining or nearby room.

The teacher should be seated at the table with the students or moving among them constantly, working with individuals and groups, rather than waiting for enrollees to come to him for help. If the teacher has a desk, it should not be at the fromt of the room, and should be pushed against the wall so that it does not separate the teacher from the enrollees.

Because a programmed learning system uses much more instructional material than is used in a conventional classroom, space must be available for storing the materials so that they are easily accessible and each student can select what he needs. Lack of enough space for storage adversely affects the efficiency of the system. If possible, the materials should be placed at one end of the room or in a central location where they can be obtained without difficulty. If the classroom is used for other purposes, material may be stored in boxes in a cabinet or closet and taken out each day for display on a table. The furniture arrangement in the classroom should be stable to encourage a feeling of comfort, ease and belonging among the enrollees. Having to re-arrange the room before using it each day may lead to a chaotic atmosphere.

In attempting to create a classroom environment which is conducive to learning and teaching, it should be kept in mind that both the physical and emotional climate have an effect upon and are affected by the teacher as well as the enrollees. The total objectives of the educational program will set the tone for the classroom, but the teacher's needs and interests also contribute to both the physical and emotional atmosphere. If the teacher needs a certain degree of order in the classroom to teach effectively, he should be honest about his requirements so that the enrollees know what the teacher's expectations are.

Overall, the classroom should present as attractive and pleasant an appearance as possible. Posters, pictures, and displays can be used to brighten the room and engage the enrollees' interest. Movable screens will serve as bulletin boards in a room which is used for other purposes at other times of the day.

3. The optimum number of enrollees per teacher varies between eight and fifteen, dependent upon the achievement level and the behavioral characteristics of the enrollees.

Optimum class size for a remedial education class using programmed instruction is determined primarily by the enrollees' behavior and academic needs. If the class is composed of a large number of beginning readers or of those in the GED program, if there is wide variation in achievement level within the group, or if there are one or more disruptive enrollees present, a smaller number for the teacher to work with is desirable. If all levels of work are included in the same classroom and beginning readers evince embarassment before their peers who are working in advanced reading, it is better to group beginning readers separately.

Two teachers working with a larger group can provide increased flexibility and opportunity for each enrollee to have more time with a teacher. Team teaching also means that the two teachers can augment and provide support for each other in dealing with problems. Conversely, team teaching can lead to problems of authority in the classroom. The success of such a team approach is dependent on the personalities of the team members; special training may be required so that teachers can work together effectively.

4. Classes should be on a daily basis, in the morning or before the work assignment. Daily attendance should be required regardless of the work assignment schedule.

Although it may be easier from the standpoint of the work assignment to schedule the remedial education component in longer and less frequent blocks

of time, such a schedule is not conducive to optimum learning. A trial of a two-day per week, three-hour session led to the conclusion by the teachers that the educational experience provided was not sufficiently frequent to result in any perceivable gains. Many enrollees have a problem of retaining what they learn from one class session to the next.

Therefore, daily classes are essential and they should be scheduled in the morning before the work assignment. Although there are problems of tardiness for classes held earlier in the morning, the enrollees are fresh and more interested than they are in afternoon classes when experience has shown that attendance is lower and enrollees are less attentive and more inclined to sleep, daydream or talk.

If scheduling classes for after the work assignment is unavoidable, such classes should be smaller so that the teacher can give more individual attention. Another consideration is that young men who have been out on work assignments which leave them hot and dirty may be reluctant to come to class under these circumstances.

The fact that many of the work assignments are on a four-day-per-week basis and, in some work bites, the four days are rotated, greatly complicates the daily class attendance but should not change its mandatory character. In a remedial education program where the enrollee is compensated for both work and class attendance, if the compensation covers only a four-day work week, he may perceive expenses for transportation on the fifth day as out-of-pocket, and his attendance on that day may suffer. But in programs where enrollees are compensated

only in part or not at all for their time in class, experience has shown this to have no great effect on attendance.

It is especially important that beginning readers and those in the GED program meet as frequently as possible, the latter because of the need to complete all the necessary work and take the GED test while their retention is still good.

Prior to attendance at remedial education classes, NYC enrollees should participate in an orientation program during which preliminary placement testing can be accomplished, and they can be introduced to the proper use of the programmed materials.

5. <u>For maximum effectiveness, the optimum amount of daily class time should be three hours, which means fifteen hours of education per week</u>.

Experience in remedial education and programmed learning leads to the conclusion that each class period should be not less than two nor more than three hours long in order to afford the enrollee enough time to settle down to productive activity for a sufficient length of time to accomplish something tangible without extending the time to the point where he becomes bored and weary. Three hours per day is considered the optimum time for effective remediation to take place. This will depend on the teacher's ability to maintain the enrollees' interest and to use the time to greatest advantage. Many variables affect the length of time enrollees are able to work in programmed material before their interest flags and boredom sets in: the maturity of the individual, the level at which he is working, and whether he is attending class in the morning, or after the work assignment.

The length of time devoted to each section of work must remain somewhat flexible but should be approximately an hour, with or without breaks. Beginning readers may need to have shorter periods between breaks. The teacher will have to be alert to such signs of boredom and fatigue as restlessness and disruptive behavior. An attempt should be made to let each enrollee proceed at his own pace, with some guidance from the teacher if the enrollee's expectations do not appear to be commensurate with his ability.

For those enrollees who want more work than the class time allows, home work may be used to supplement work in the classroom, but routine assignment of home work may be accompanied by such problems as possible loss or damage of the instructional materials, an adverse home situation which does not provide suitable conditions for learning, or excessive socializing in class if work is done at home. Although home work should not be totally ruled out, it is useful only for the highly motivated.

6. <u>The Job Corps programmed instructional materials, in general, are satisfactory for this program but have some serious deficiencies which need special procedures to remedy. Such procedures can be developed</u>.

The Job Corps system of programmed instructional material was selected for the Experiment for two primary reasons: (a) it was a complete system providing for a range of educational achievement from pre-reading and pre-math to GED readiness; and (b) the Job Corps system included diagnostic tests and procedures that permitted students to enter the program at different levels and to proceed at their own pace. Experience with the Job Corps system bore out the

importance of these features, but also disclosed problems--some of which were implicit in the features themselves. Our discussion of Job Corps materials is, accordingly, divided into deficiencies associated with range and deficiencies associated with placement procedures.

a) The desirable characteristics of being complete, self-contained and flexible are accompanied by the problem of the material's complexity and sheer bulk. This creates some difficulties for the teachers who must gain a command of the system's hundreds of units if they are to be used efficiently and effectively.

Although there is some duplication in the material, attempts to simplify it by condensing it or combining it into small units would be of limited value. The format of numerous short units is advantageous for enrollees working in the lower level material because a frequent shift from one unit to another helps to maintain their interest levels.

The experience of the past year indicates that the teachers do not find the material too difficult to administer but a better explanation of how it is to be used, and the elimination of much of the elaborate record-keeping would ease the burden on the teacher and leave more time for actual work with the enrollees. The complicated identification system for the various units should be simplified to make it easier for enrollees to keep track of their positions in the program. A solution may be to group the units of reading and math into levels with the requirement that each enrollee must complete an entire level in both subjects before moving ahead in either. If initial testing indicated that

an enrollee was more advanced in one subject, exclusive concentration on the other would be necessary until an equal level in each was reached.

If a problem arises occasionally when a unti of work is not available at the time an enrollee is ready for it, teachers must be innovative in finding an adequate substitute, shifting the enrollee to other work temporarily, or using supplementary material. But care must be taken to avoid disrupting the sequential features of the system.

The size of the class and the facilities for good display and storage will be determinants of whether it is best for the student, a teacher aide, or the teacher to have the task of keeping the many units of instructional material in order so that maximum use can be made of them. Some teachers feel that ideally the enrollees should take responsibility in order to gain independence in working with the programmed materials. However, the teacher should bear ultimate responsibility. If the teacher handles all the materials, it is easier to maintain a current inventory. Other possibilities are a visual inventory check list which all users would participate in maintaining, or rotation of responsibility among the teachers for compliling a list of items needing replacement.

Consumable materials such as beginning reading books may be rendered reuseable by the use of transparent plastic sheets and a china marking pencil. This allows the beginning reader to insert a word or letter in its proper place on a page without marking up the page. This technique is superior to the use of separate sheets of paper to write on, but experience indicates that the latter

has been used by some enrollees without apparent difficulty.

The Job Corps instructional materials are designed to provide complete coverage for basic education and preparation for the GED. But there are areas of weakness and the extant materials do not provide the means for bridging most of the gaps. The unit on percentages in the basic education materials is especially poor and the teacher must supplement from other sources or develop his own percentages material. Although the material on percentages is inadequate, the unit test does measure all the aspects of percentages work and teachers can use the unit tests as beginning points for developing supplementary problems.

Other areas of weakness include:

1) the English grammar and spelling in the basic education;

2) the lack of oral reading material for beginning readers;

3) the irrelevance of both the basic education and the GED materials for young black adults;

4) in the GED materials, the lack of detail in the units on American and European culture;

5) the GED literature section;

6) the brevity of the reading selections which makes them unsuitable for developing comprehension skills.

To compensate, the teacher will need to be innovative and to supplement by such techniques as: giving special instruction to a group of enrollees with a common learning problem, combining the individualized programmed instruction with a classroom introduction to the subject, use of the advanced reading program (SRA Lab) between completion of the basic education program and preparation for the GED, compilation of a black library, and use of supplemental materials

which are black-oriented to serve as an initial enticement to enrollees.

There are other compelling reasons for providing supplementation: (a) the approaches for helping the student whose learning problem is not solved by the programmed instruction alone; (b) the materials need to be brought to life; the routine approach of programmed instruction bores many of the students, particularly those with short attention spans; and (c) some relationship should be developed between what is learned in the classroom and the enrollees' lives.

In order to increase interest and to provide alternative learning experiences when the student does not progress using the programmed materials alone, supplementation should be developed for use on an individual and a group basis. Use of supplementary material will have to be varied according to the individual needs of the enrollee, with classroom learning and the work assignment closely tied. Examples from the job may be devised by the teacher to illustrate the math or reading lessons and material from other programmed instruction systems also may be used.

Group work is facilitated by supplementary instructional materials or such techniques as a film followed by a discussion, speakers drawn from outside sources or among the enrollees, field trips, educational programs, oral book reports, role playing, a Black Studies course developed in-house, or the xeroxing of common materials such as newspaper food ads to be used as bases for discussion. Almost anything may be used to break the routine and serve as a learning situation, but the teacher should excercise care so that the limited educational time is used effectively.

Although the GED material has been designed as minimum preparation for passing the GED test, completion of the program requires so much time that some enrollees have a retention problem which is further complicated by the supplementation which is necessary.

Many of the enrollees have little experience as participants in the larger community; neither they nor their family or friends feel themselves to be an essential part of the city, state or nation. Providing for experiences which give insight into the role of the individual in society should be a vital part of the classroom program. Teachers should become aware of services available in the community as resources for enriching and enlivening the learning process; visitors from other countries, particularly Africa, or innovative social studies programs developed by a public school system would add interest to the classroom. Even such ordinary materials as city telephone books and catalogs can be used for learning spelling skills and how to look up names or words. Catalogs also may be useful for devising math problems and for teaching consumer skills.

b) Diagnosis and placement procedures are incorporated within the system so that students can enter the program at different levels and different times and proceed at their own pace. Flexibility is maximized to meet individual needs, but teachers have encountered problems in diagnosing blocks in learning and evolving remedial strategies when the programmed materials are not sufficient to keep the student moving forward, or when enrollees who have unusual difficulty in learning and retaining knowledge are included in the remedial education groups. To avoid having inaccurate placement assume undue importance for the enrollee, the educational program should be kept as flexible as possible.

When placement is inaccurate, it may be due to several factors, including: the general invalidity of the testing instrument; the disinterest of the enrollee in working on the tests, which leads to an inaccurate measure of his achievement level; or the need of the youth for outside professional help with an emotional problem. Remedying the situation will depend on whether inaccurate placement was due to simple error or to more complex factors. The developmental and sequential nature of the testing will help to pinpoint many of the problems. Inaccurate placement in math is more obvious and easy to detect than in reading.

Since no standardized tests have been perfected yet, a teacher has to make a diagnosis on the basis of many other things: the enrollee's appearance, his behavior, and interpersonal relationships. A more adequate diagnosis may be attempted by varying the testing approach: reading the material to the enrollee and asking him to tell the story back to the teacher or by having the enrollee read aloud from the reading test paragraphs which have been re-arranged in random order. If placement is found to be inaccurate, an adjustment should be made as soon as possible.

It is the teacher's responsibility to make the initial diagnosis of special problems and it is important that he seek many sources of information: outside experts, books and other materials, or a weekly case conference on each enrollee, using all concerned staff members as participants in the discussion to determine the course to be taken in meeting the enrollee's individual problems. If it is decided, in consultation with the enrollee's counselor, that the problem

requires more than can be provided by the programmed material, individual attention and/or supplementation, outside help should be sought. Retaining an enrollee in the classroom may create other major problems, and often referral elsewhere is the best solution.

If an enrollee places at a level in the reading test which is considerably beyond his ability to spell and pronounce the words in use, the teacher should devise supplementary spelling work from words in the workbooks, arrange for the use of a tape recorder to record speech patterns for work in pronunciation or give the enrollee more practice in oral reading from the test level. In some cases, there may be no alternative but to tell the enrollee that even though tests indicate that he is at one level, he will need to begin work at a lower level. Beginning at a lower level may provide more immediate success experience.

Although breaking the lockstep approach of group instruction is one of the advantages of the Job Corps materials, their use on a completely individualized basis leads to virtual isolation of the students and a loss of the benefits available through student interchange of ideas. Due to the great diversity of achievement of the enrollees, there are few units of the programmed material in which the total group can participate at any one time. Because group work provides personal relationship experience, and verbalization helps to solve individual problems, teachers should encourage voluntary work in group sessions by students, use of board work with small groups of three or four, and the use of more advanced students to tutor slower students.

There have been several attempts to expand the subject matter in the classes beyond reading and mathematics. Such efforts have been the outgrowth of

students' requests and teachers' conceptions of ways to broaden and supplement the rather restricted educational bill of fare, especially in the basic education program. Although the addition of other subjects may be essential to break the routine, to relieve boredom and to motivate students, it must be recognized that any expansion of the curriculum will be at the expense of the programmed instruction becuase of the limited number of hours per week. An exception might be the acquisition of skills for participation in job interivews which might be added as extra material when a group of enrollees has reached the point of job readiness.

7. No standardized tests have been found which are entirely adequate for individual diagnosis and measurement of progress. Thus, until more adequate tests are available, measurement of progress remains a partially subjective process, dependent on the skill and understanding of the teacher.

One persistent problem in measuring progress of students in any educational program is the difficulty of finding a good measuring instrument. Standardized tests are not recommended by their publishers for groups of low achievers and especially adults but there are no better tests available. The California Test Bureau cautions that in the use of the California Achievement Test, "... it is essential that in all uses and interpretations of test results that school personnel be aware of the mental or physical handicaps, the social and emotional problems, or the language difficulties which may limit individual performance and achievement."

Accelerated Learning Experiment teachers and administrators feel the

achievement tests: are not geared to, and may be invalid for, their enrollees; are too long, repetitious and boring; and are regarded as threatening, particularly to the non-readers. To rely on them heavily for purposes of diagnosis is unwise since the tests are designed for measurement of large groups rather than as individual measures. This is particularly true for the measurement of the potential of slow learners.

In addition, it is difficult to control and standardize the testing conditions (time, place, and administration) and impossible to predict what the enrollees' attitudes, motivation and physical condition will be at the time they are tested. They may be overly concerned about taking tests and, thus, attempt to avoid them; they may perceive no relevance, be bored or annoyed by them, and, therefore, put forth little effort or react completely negatively.

Initial achievement tests should be individually administered during the NYC orientation program before the enrollee is assigned to the classroom. Plenty of time should be allowed for explanation of the purpose of the test and the procedure to be followed. Much will depend upon the skill of the test administrator who should try to establish sufficient rapport with the enrollee to gain his cooperation. For the exceptionally threatened enrollee, one possibility is that the Job Corps Prediagnostic and Diagnostic Tests in reading be administered first, as a screening device. Only those who score above the fifth grade level on the Job Corps tests then would go on to take the achievement test. This, however, introduces the problem of singling out those enrollees who scored too low, which may be more damaging than giving the achievement test to everyone.

In order to lessen apprehension about subsequent tests, given at regular intervals during remedial education enrollment, the teacher can introduce the enrollees to other tests such as Civil Service tests, by promoting the attitude that testing is practice. The test administrator also should attempt to avoid times of day or week when enrollees are excited, at a low point or under unusual stress.

Finding a means of determining when an enrollee is ready to take the GED tests depends upon more than the completion of all the GED books. Teachers and counselors have devised, by trial and error, some subjective and some objective methods of making such a determination so as to prevent, if possible, failure due to being ill-prepared. The more objective means of determining readiness is to use a standard measure like the California Achievement Test. If using such test scores are perceived as threatening by the enrollee, it may be preferable to let him take the GED when he feels he is ready, then analyze his reasons for failure if that is the result, and help him prepare to take it again. The more subjective means of determining readiness is to observe the enrollee in class and on the job and when the teacher and counselor feel he is ready, encourage him to take the GED.

Extra evening sessions for groups may be scheduled, using board work to drill and hit the weak points, or volunteers may be used to do special work with the group preparing for the GED. Such use of volunteers contributes a more personal approach which the enrollee may feel he needs.

8. Using programmed instructional materials, teachers who are high school graduates or have some college experience can, with pre-service and in-service training, do very well. The most important criteria are the personal characteristics of the teacher.

When the Accelerated Learning Experiment was begun, one of its primary concerns was to determine if programmed materials developed by the Job Corps could be used effectively by non-certificated teachers to improve reading and arithmetic skills of out-of-school enrollees. It has been found that teachers using Job Corps materials do not require a high degree of academic training, but it is essential that they have a good knowledge and a degree of security about the materials to be handled. The teaching of basic reading requires more training on what resources are available but this can be taken care of by pre-service and in-service training programs.

An adequate program of pre-service training in the administration of the Job Corps materials can be accomplished in three days provided the teachers have had some prior preparation with the Teacher's Manual. All of the instructional material should be available for inspection and use during the pre-service training.

Once the teacher has begun work with the enrollees, there should be in-service training at regular periods to deal with special areas, to cover techniques for supplementing without disrupting the program, and to provide opportunities for teachers to discuss problems with a specialist. Teachers should have additional instruction in teaching reading after working in the program for a while. It is estimated that thirty hours of special work should be enough to give the non-

certificated teacher the basic skills in the teaching of reading. In-service training may take various forms, e.g., (a) a course for credit at a local university with tuition paid by the agency sponsoring the remedial education program; (b) special training offered by a university faculty member who has contracted to meet with the teachers on a regular basis.

Despite the fact that standardized training in the use of the materials is provided by the Job Corps, and there are teachers' manuals which accompany all of students' workbooks, only a part of the teachers' total responsibilities are provided for by these means.

The experience of the last year has shown that the individualized character of the instruction places responsibilities on the teacher far different from those created by the conventional classroom. The materials do not teach themselves but require active participation on the part of the teacher. But the degree to which the teacher participates actively should be dependent on the situation. A careful line must be steered between being only a monitor in the classroom and attempting to spur the enrollees onward so sharply that there are disruptive effects.

Within the classroom setting, the teacher should be moving around working actively with individuals at least three-quarters of the time. A close relationship with the enrollees' counselors should be maintained, and work-related material should be used supplementarily wherever possible.

Other educational experiments have concluded that personal attributes of teachers in programmed learning should be given great consideration. The

ability to relate to disadvantaged youth and a real interest in them as individuals appear to be essential to progress in the classroom.

Besides training in the administration of the Job Corps materials, teachers need a pre-service orientation before going into the classroom. There are certain essential personal characteristics which pre-service training alone cannot supply but it may aid in providing the teacher with insight as to his feelings about the enrollees, his ability to accept criticism and challenge from them and his degree of flexibility. If the teacher has had little or no previous experience with this population, the orientation program is essential to define for him what his responsibilities are, and to give him some idea of the kinds of problems he will be facing.

Teachers in decentralized classroom sites need to have supportive services provided: a weekly staff conference with provision for group discussion of problems, active participation in the remedial education program by the administrator; and some arrangement for contact with and occasional help from a university special education department for enrollees with problems which the teacher feels unable to handle alone.

In establishing an effective relationship with the enrollees, a careful balance must be maintained between an interpersonal relationship that is too formal and one so informal that roles become confused. There is a fine line between the roles of "friend" and "teacher" and teachers must be alert to avoid enrollees' attempts to manipulate them. The solution may be that the teacher be a demanding friend, insisting that enrollees maintain certain standards.

A variety of techniques should be devised for dealing with enrollees who are disruptive in the classroom setting, or present special problems: hostility to authority, sleeping in class, or discipline problems. Disruptive behavior usually stems from boredom or a lack of interest or motivation, and the teacher can attempt to counteract it with counseling or by using more work-oriented materials. Another tactic to handle disruptive or hostile behavior is to reverse roles and let the perpetrator be placed in charge of the class for a period of time.

A sense of humor is eesential for the teacher to have at all times and may be used to deal with hostility against authority. In any conflict between teacher and enrollee, care must be taken to avoid "cornering" the enrollee, who should always be left with some face-saving way out of the situation. If the teacher fails to use consideration in handling the conflict, he runs the risk of losing the respect of the rest of the class. If none of the techniques which the teacher attempts are successful, it may be necessary as a last resort to terminate the enrollee.

In a class conducted on the basis of encouraging each student to progress at his own pace, maintenance of group discipline poses special problems. It is clear that some standards for behavior must be established to which members of the group must adhere. But a learning group may need to have a different structure than would be suitable for groups organized for other purposes.

Although the teacher should set some standards for behavior and the enrollees as a group should set others, in the final analysis, the teacher bears

responsibility for the standards which are established and also for their enforcement. In his efforts to enforce standards, he should be backed up by the educational program administrator and other staff.

Within any organized group, cohesiveness can become a powerful force for influencing and motivating individual members. But building group cohesion takes time. To compound the problem, the fluidity of the NYC enrollment leads to a group membership constantly in flux.

On the other hand, there are disadvantages to dealing with very tight groups, e.g., the difficulty which new enrollees may encounter in gaining group acceptance. One way of coping with this is to fit new enrollees into a less cohesive group and to leave unchanged a more cohesive group until its membership has been sufficiently decimated by terminations so that several new enrollees can be added at once.

Lack of cohesion may manifest itself in intragroup conflict, disruptive behavior, teasing and destructive competitiveness. Group meetings can be used to encourage participation and settle problems which individuals have encountered within the group, but teasing and ostracism always should be handled by a counselor. Care should be taken to prevent enrollees from using specially coined derogatory nicknames for each other, and to avoid conflicts about favoritism, teachers and counselors should insist that all enrollees address them by the same names.

9. <u>Since motivation for class attendance and academic progress is crucial to the success of the program, an incentive system involving tangible and intangible rewards should be established</u>.

Many enrollees, particularly males, have negative attitudes towards the

school experience. Part of this negativism is associated with the enrollee's low estimate of his own ability to do school work, and with low thresholds of frustration and boredom. The rejection of schooling by dropouts also frequently means that the enrollee considers schooling to be irrelevant to his concerns. Thus, the level of motivation to participate in further education is often low.

To arrive at appropriate standards of achievement which such students should be expected to meet presents grave problems. The instructor and the student may differ vastly in their evaluations and expectations of the student's achievements.

Standards of achievement for enrollees should be established on an individual basis, depending on such variables as achievement level at entry, occupational goals, etc. But it has to be recognized that group standards also come into play. No one standard can be set to which all enrollees should be expected to measure up, but there are certain expectations or goals for this group, e.g., preparation for employment, which provide the frame of reference for setting achievement standards. Such standards should be arrived at mutually by the teacher and the individual enrollee working together. If possible, the counselor and work supervisor also should be involved. By observing the performance of an enrollee over a period of time, a teacher ought to be able to estimate his capabilities fairly accurately. If the teacher feels that the enrollee is setting his standards too low, efforts should be made to raise them to a level more commensurate with his ability.

In setting standards of achievement, recognition should be given to the culturally induced differences and occupational goal differences of males and

females. Generally speaking, females have less negative attitudes toward schooling than males; they also are more likely to be more mature and accepting of authority, to have learned more while in school, to achieve better in the classroom, and to have left school due to some situational factor, such as pregnancy, rather than rebellious behavior.

A salient characteristic of the NYC enrollees who enter the remedial education program is their wide range of academic achievement. Some of them are pre-readers; others are nearly ready for the GED test. For the latter it may be only a short period of time before they reach their goal of a high school equivalency diploma. But for those who are functionally illiterate, the educational program will be much more extended. An ultimate goal of the GED may seem a very distant possibility to such an enrollee, perhaps requiring more time than his entire NYC contract. The long-range goal should be broken up into many smaller units so that there are frequent opportunities for meeting short-range goals.

Some efforts at individual and group self-evaluation may be attempted if the programmed learning flow charts do not satisfy the enrollees' needs for a reflection of their progress.

Once individual and group standards for achievement in the classroom have been established, the problem of motivation of those who are negatively conditioned to academic activities still remains. To discover what will motivate an individual may require a lot of trial and error efforts. The first step is to attempt to determine, by means of the initial screening process and counseling,

the reasons for the negative attitudes. This should be done before assignment to class, and should include a preliminary attempt to identify those with special learning problems. It is possible that an enrollee whose reaction to the classroom is extremely negative should not be assigned to remedial education until after he has been on his work assignment for a time and there is some indication of motivational change.

Various kinds of incentives have been used for motivational purposes. The ultimate incentive in the NYC program is the prospect of satisfactory employment, but often this is such a long-range goal that its effect an an incentive is diminished. Except for payment for attendance in remedial education classes, tangible rewards such as money and other items which have exchange value are rarely available within the NYC. But other items such as books and other printed material, and group rewards such as field trips, picnics, and class snacks may be used. However, unless handled subtly, individual rewards in the form of candy or "treats" may be regarded as insulting and demeaning to young adults. If used, such a reward should be considered as a tangible symbol of the approval of the instructor rather than for its own sake. Reward symbols should be related to the world of work as much as possible.

Other commonly used individual rewards are grades or comments on completed assignments, the posting of achievement charts or the listing of achievers in the NYC newspaper. One form of often-used short-range reward is the smoke break or a brief free time to read or relax after a period of concentrated work.

The effectiveness in intangible rewards as motivators is dependent upon the development of a positive relationship between the teacher and the enrollee. Such intangibles include the satisfaction of the enrollee himself in completing something successfully, praise, and the friendship and approval of the teacher or peers.

Slow learners present special problems in motivation because their rate of progress may be so slow as to cancel out any motivation derived from successful completion of work units. Incentives used with those who learn more slowly should be tangible, immediate and frequent. The teacher should expect to give increased attention to this kind of enrollee, and should assign more advanced enrollees to help him in his learning experience.

Arranging for separate classes for beginning readers helps to avoid invidious comparisons by more advanced peers, and may prevent excessive ego problems. The slower enrollee should be given the opportunity to "fail successfully"--to fail in a guarded, protected situation so he is able to recognize what his real limitations are without being punished or removed from the system. If allowed to "fail successfully", the slow learner may be encouraged to make an attempt in higher risk situations in the future, whereas a devastating failure experience will discourage him from trying anything where a similar failure might be a possibility.

10. <u>The remedial education component should be considered as essential to the success of the NYC program as the work experience and counseling. Wherever possible, the teaching and counseling functions should be combined. For some</u>

enrollees, the remedial education class also should serve as meaningful work experience.

There have been several experiments in coordinating the roles of teacher and counselor: NYC counselors have been used as teachers while the counseling continued to be supplied at the various work sites; a classroom at a work site provided for close cooperation between the teachers and the counselor at that site; one of the teachers also served as counselor for all the enrollees in the remedial education program.

There are obvious advantages, from the standpoint of the program, in having the teacher also serve as counselor. Every teacher should do some counseling. If it is not possible for one staff member to serve in both capacities, an alternative is a team approach with the teacher and counselor working closely together. The counselor should be aware of the enrollee's educational experience and might act as a teacher's aide, helping in the classroom the enrollees he counsels. In such an arrangement, actual counseling should take place in the counselor's office, and the teacher should assume responsibility for any punitive action toward the enrollee which might be necessary in the classroom. It is important that each of the three participants in this relationship be made clearly aware of his role and responsibilities.

Upgrading the educational achievement of the out-of-school NYC enrollees is vital to making them job-ready, but an educational program without a clearly evident tie to employment will have little appeal for the enrollees. Therefore, every possible means should be explored to develop a close relationship

between the NYC work experience and the educational component. Unless work assignments can be made more meaningful, relating them to the educational process is difficult.

Ways must be found to escalate enrollees into higher level jobs with opportunities for promotion and advancement. Frequently, the least well-equipped enrollee is assigned to the least meaningful job, becomes dissatisfied and terminates from the program. On the other hand, if given a demanding job, he may not be able to meet the required standards and, as a result, is forced out.

Although the ultimate goal of the program is meaningful work leading to job-readiness, more of the enrollees' time should be devoted to education. Increased flexibility in scheduling may be the answer. It is difficult to assign priorities in attempting to meet the needs of enrollees, each of whom must be looked upon and prescribed for as an individual. But if the work assignment appears meaningless to an enrollee, effort should be made for him to spend more time in the educational program in order to attain the high school equivalency diploma and be ready for job placement or seeking jobs on his own.

VI

Conclusions and Recommendations

The rationale for the Accelerated Learning Experiment constituted propositions, or working hypotheses, concerning remedial education programs for out-of-school youth. While each of these hypotheses could not be rigorously tested within the limits of the design of the Experiment, potentially useful information was obtained from the statistical analysis of the data, teachers' and administrators' reports, the proceedings of the workshop, and observations of the research staff. This chapter reviews the evidence bearing on each of the research questions and makes recommendations based on this evidence.

Discussion of Research Questions

Participation of Male Enrollees

The rationale of the Experiment took notice of the particular problems of male enrollees with respect to remedial education; and one of the indications of the effectiveness of the ALE was the extent to which male enrollees participated in it. Notwithstanding high turnover in the ALE groups generally, a sizeable proportion of all male enrollees in the three ALE sites stayed in the Experiment at least three months. The attendance rate for all participating male enrollees was well above 70 percent, and from 14 to 53 percent (depending on the site) of all male enrollees participated enough to benefit materially from the program. Compared to the results of other studies of NYC enrollees, these results indicated that the ALE approach to remedial education could provide more effective remediation than conventional NYC remedial education programs. It should be noted, however, that while the program was successful in comparison to existing programs,

it still falls short of meeting needs.

The influence of various ALE components on these results is difficult to assess. The probable effects of classroom location, use of Job Corps instructional materials, and aspects of staffing such as teacher-counselor combinations, the use of non-certificated teachers and of teacher aides, however, can be deduced from the data produced by the Experiment. These components are discussed below.

Classroom Location

During the course of the Experiment, it became apparent that the original experimental design with regard to the proximity of the classroom to the work site had been vindicated by the experience of the three sites. It had been hypothesized that location of the classroom adjacent to the work site would make more salient the relationship of the educational to the work experience, and would encourage attendance by increasing accessibility and convenience. The basis for this was the conviction that the educational component is an essential part of the NYC experience and every possible means should be used to develop a close relationship between the two. Other research[1] had supported the position that remedial education should be tied closely to the work site.

[1]Patricia Cayo Sexton, "Operation Retrieval"--a report on The Basic Education Component of Experimental and Demonstration Projects for Disadvantaged Youths. U.S. Department of Labor, Office of Manpower, Automation and Training, Division of Special Programs.

In Cincinnati, the classrooms were located near a cluster of work sites, and even though a large proportion of the enrollees were males, the attendance and retention rates ramained relatively high and terminees were replaced quickly. In St. Louis, where the classroom served only one work site and was housed in the same building, although the attendance rate was not as high and the number of enrollees was limited by the size of the work site, terminees were easily replaced and there was close coordination between the teachers and the counselor. In Pittsburgh, one central classroom served work sites in all areas of the city and many enrollees had to travel long distances to the classroom. This was time-consuming and costly. Attendance and retention rates, particularly for males, were not good, teachers had little or no contact with counselors, and the procedure for replacement of terminees was too cumbersome to be practicable. Enrollment fell from over fifty to less than twenty during the first six months period.

During the remedial education work shop, teachers indicated that they regarded a decentralized classroom located adjacent to a work site or cluster of work sites as the most satisfactory for a close working relationship with counselors and a better understanding of the totality of the enrollee's NYC experience. Decentralization promoted easier contact between the teacher, work counselor and the work supervisor for each enrollee, making follow-up of problems and replacement of terminees more efficient.

In addition, locating the classroom near the work site is conducive to making attendance in classes as convenient and easy as possible for the

enrollees so that transportation costs and travel time can be held to a minimum. However, decentralization of classrooms may mean selecting work sites on the basis of their proximity to classroom locations, if every NYC enrollee is to have access to the educational program. Otherwise, it will prove difficult to include every enrollee, especially those in small isolated work sites.

Effectiveness of the Job Corps System for NYC Enrollees

The Job Corps material originally was selected for use in the Experiment because:

a) the materials included extended from beginning reading and math to the 7.5 grade level. A few months after the Experiment began, GED preparatory materials were added;

b) it is a complete system with diagnostic and placement procedures coordinated with the instructional materials;

c) it permitted entry into a remedial education program by an individual enrollee at any point in time;

d) any enrollee may begin at his own level of achievement and proceed at his own pace through the material;

e) there are standardized instructions for teachers, and persons used as teachers do not need to have teaching certificates.

NYC enrollees assigned to a cluster of work sites or even to a single work site vary greatly in number of years of school completed, academic achievement and motivation toward educational goals. It was found that the use of Job Corps programmed instruction made possible the inclusion of this wide variation

within one classroom because each enrollee was enabled to work at his own pace, with periodic individual help from the teacher. Group techniques can be employed for small groups within the classroom, or the entire group of enrollees participated in some appropriate supplemental activity. Therefore, the system provided maximum flexibility for great diversity among enrollees within one classroom.

Because it is designed for individual activity with small, self-contained units, the Job Corps system is capable of serving the needs of each enrollee, regardless of the various areas of strength and weakness within his reading and computational skills. The GED material was described thus by one experienced teacher:

> One of its strongest points is that a student's progress is measured specifically and recorded simply. For the student, this provides constant reinforcement and motivation and a constant on-going assessment of his achievement. For the teacher, it makes assignment of supplemental work simple and direct.

The diagnostic tests serve to place the enrollee at his proper level when he enters the program, and the frequently scheduled unit and mastery tests correct for any errors in the initial diagnosis, and permit him to bypass material with which he is already familiar as he moves through the system. However, successful use of the materials is predicated on the assumption that the enrollee does not have any physical or mental condition which may lead to severe learning problems.

There are some gaps in the programmed instruction, such as in the areas of percentages and spelling, but once the teacher is aware of these, they may be easily corrected by the use of supplementary materials.

Besides making it possible for a teacher to handle successfully within one classroom enrollees who varied widely in educational needs, the Job Corps system also has several other practical advantages:

a) its organization in small self-contained units permits the individual enrollee to select and procure his own materials from the storage area;

b) it may be used without an investment in expensive hardware and it requires very simple storage facilities, which makes it practicable in classrooms which also are used for other purposed at other times of the day; and,

c) it is almost entirely re-useable, especially if clear plastic sheets and marking pencils are used with the beginning reading and arithmetic units, thus, conserving time, effort and money in the replacement of consumed materials.

Conclusions drawn from the fifteen months' experience with the Job Corps programmed instruction system in three sites are that they can be considered basic materials to take an enrollee from the pre-reading and pre-arithmetic level to readiness for the GED test and they show potential of being superior to standard educational materials provided that three conditions are met: a) they must be used properly; b) the teacher must play a vital role; and c) the materials must be supplemented. Since the Job Corps material is a complete system, it is essential that directions for its use be followed closely. If either teacher or enrollee failed to use the material in its proper sequential order, confusion and

dissatisfaction resulted. Retention of the programmed instructional material by the enrollees occasionally posed problems if it was not used properly or was hurried through. A teacher's account of this problem among enrollees in the GED group is illustrative:

> The students are in such a hurry to get that GED, and we have been letting ourselves think that the PI (programmed instruction) is the easy, fast way to get ready for it. Most of the students have been taking several books for homework after each class, bringing them back completed and taking the subsequent unit test in class. We agreed that we have been in too much of a hurry; the material in the books is retained for a few days, but may not sink in permanently.

Even with proper use, the Job Corps system cannot fulfill all the needs of out-of-school NYC enrollees. The personal qualities of the instructor--important to the success of any instructional program--are perhaps even more important in programs that use programmed materials. Programmed instruction frees the teacher from some tasks required by standard educational materials, but imposes other requirements such as supplementation on a variety of levels, and giving individual attention to students who are working at different points in the materials.

This is illustrated by a teacher's report after the Experiment had been in operation for the first six months:

> It appears that materials <u>per se</u> are not really necessary in supplementing the standard Job Corps curriculum. What is needed is more individual attention and more ability on the part of the instructor to intervene at the proper time and clarify the standard curriculum for the student. The material does not offer enough

> why's and wherefore's and consequently the knowledge gained by the student is all too frequently not transferrable from one problem to the next.

The content of the programmed instruction was not perceived by the enrollees as having a close relationship to their lives and the world of work. Therefore, it is essential that supplementary material for this purpose be provided by the teacher. This may take many forms, depending on the imagination and ingenuity of the teacher, and the resources available in the community.

Because of its organization into a multitude of small units and the frequent self-administered tests, the Job Corps material is very bulky and requires a substantial amount of shelf space for its most efficient use. The cost for enough materials to serve 25-30 students simultaneously was approximately $1,800. The ordering procedure through U.S. Government Services Administration regional offices was found to be slow and cumbersome. The combination of cost, bulk, and ordering delays and inconvenience can be expected to limit its usefulness and suggest the desirability of a careful analysis of the present system to reduce costs and simplify the use and maintenance of materials.

In summary, it was concluded that the Job Corps system helped facilitate learning in the ALE but that the materials had to be supplemented, the teacher had to play an appropriate role, and the student had to make an effort. As with any educational materials, the enrollee must be sufficiently motivated, and willing to devote time required to complete the work. Materials by themselves are not an easy avenue to instantaneous knowledge.

The Teacher-Counselor

Because the educational, employment and social problems of the enrollees have been observed as interrelated, one of the hypotheses to be tested in the research was that better results could be obtained through the coordination of education and counseling either by having the same person serve in both capacities or by placing the teacher and counselor within the same organizational unit.

Information gleaned from teacher reports and remedial education workshop discussions indicated that the combination of teaching and counseling functions tended to bring the work site and educational experience closer. The fact that the Experiment's teachers had daily contact with the enrollees provided many opportunities for informal counseling as well as group counseling and discussions growing out of classroom events. The combination of teaching and counseling also provided opportunities for group counseling (including world of work material), group discussions of enrollee problems, development of oral skills among enrollees, and the growth of peer group relationships and teacher-enrollee relationships.

Another benefit of the combination was that it contributed to the quick and efficient replacement of terminees from the educational programs. When, as in Pittsburgh's first six months' program, the teachers had to deal with a large number of counselors at several work sites to discuss enrollees' personal problems, absenteeism or termination from their work sites or the educational program, the process became so unwieldy that it was almost inoperable. Teachers had to spend too much time trying to contact the counselors, and in the meantime, the problems grew.

Therefore, the conclusions reached by the research are that teaching should be combined with counseling in order to perceive the enrollee as an entity and help him to cope with his social, educational and employment problems more adequately. The combination role also leads to more efficient operation of the program.

Adequacy of Non-Certificated Teachers

The Job Corps system of programmed instruction has been used extensively at Job Corps Conservation Centers, military bases, and in urban elementary school classes, but certification has been one of the requirements for teachers in all of these sites. One purpose of the Experiment design was to determine if non-certificated teachers with a high school diploma or only one or two years of college could function adequately in the classroom, using the Job Corps system. The results of the Experiment indicated that non-certificated teachers can be as effective as certificated teachers, and that characteristics other than certification are probably more important to effective work, as follows:

a) Non-certificated teachers were able to handle the numerous units and to guide the enrollees through the sequential steps of the system. After the first few weeks of the Experiment, both teachers and enrollees reported no difficulty in working with the instructional materials.

b) Non-certificated teachers demonstrated the ability to devise creative solutions to problems, to improvise, to establish rapport with the enrollee, to deal with discipline problems, and to seek outside assistance in areas in which they recognized themselves to lack sufficient competence.

c) Personal qualities such as flexibility, ingenuity and interest in the enrollees were found to be of the utmost importance. Almost all of the non-certificated teachers, informally rated by the research staff and educational consultant, were adjudged adequate or better. One certificated teacher was rated as exceptional. Of the three certificated teachers using the Job Corps materials in the period after the first six months in Pittsburgh, one was rated as adequate or better, and the other two appeared to be totally inadequate.

Thus, our research shows that non-certificated teachers, if carefully selected, can perform very successfully with NYC enrollees in a program like the Experiment.

Use of Teacher Aides

Each of the three sites experimented with the use of teacher aides. In Cincinnati, where the Accelerated Learning Experiment served as a work site for two NYC enrollees, the aides helped the instructors during class time by obtaining materials for other enrollees from the storage shelves, assisting beginning readers with oral reading and phonics practice and monitoring the classes if the instructors had to leave the room. They gave assistance with record keeping and other duties during the time when the classes were not in session.

Teacher aides can, thus, be utilized as an integral part of each educational program. The development of the position of teacher aides as an NYC work assignment should be seriously considered for several reasons:

a) It allows the teacher more time to give individual help to those who need it while the teacher aide carries on the routine work.

b) Working with the instructional materials increased the teacher aide's knowledge of the subject matter.

c) The teacher aide is given the opportunity to practice interpersonal skills on other enrollees and to work closely with the teacher.

Desirable Modifications

The ALE, while it was a success in comparison with conventional educational programs, was severely limited in its results in relation to the educational needs of out-of-school NYC enrollees. In the course of the Experiment, a number of ways in which the educational program might be strengthened and should be considered in connection with any future experimentation. These areas of possible improvement relate to the structure of the program, the motivation of the students, and the training and support provided to the teachers.

Motivation of Students

An interesting finding of the Experiment was that 94% of the enrollees said they wanted to complete high school but a large proportion of them did not take advantage of the opportunity to continue their education even when they were paid for time spent in the classroom. Most of the participants showed some enthusiasm at the beginning of the program for a chance to complete an interrupted education but many of them lost interest very quickly and relatively few maintained interest for as long as six months. It seems apparent that while some motivation is present, in many cases, it is of low intensity and needs to be used to the maximum, suggesting various possible strategies:

a) Compulsory attendance in educational classes is not likely to be effective except during an initial period of a few weeks while the student still retains some of his initial enthusiasm.

Compulsory attendance for an enrollee who had lost interest has not only proved to be almost entirely useless, from the standpoint of his learning, but also places an additional burden on the teacher who may have to cope with his disruptive and aimless activities in the classroom. That the Experiment teachers were particularly concerned about this is evident from their reports:

> Discipline problems have been caused primarily by youngsters who are not interested and pay more attention to the assignments of others than they do to their own. Instructor has tried talking to enrollees individually and in a group. Lack of interest and indifference on the part of some enrollees continues to be a greater problem than anything else.
>
> . . . there are a few enrollees with whom we are having attendance problems in class. Often their work attendance is rather good. We have been using rather mild and indirect methods to encourage class attendance. These methods have not been successful. They are coming just enough to get by. I feel we are doing a disservice to permit this to continue.

b) Experiments should be conducted with incentives for educational achievement. The most effective compensation is likely to be financial payments in which the rewards are immediate and tangible. Various incentive systems which might be tried have been proposed, ranging from one-shot payments for specific goals reached to small hourly increments for diligence and steady progress.

Enrollees frequently do not have a clear concept of the length of time required to achieve goals and how they are progressing through the materials. There is evidence for this in the request of Cincinnati enrollees that report cards be used, and in the St. Louis enrollee's project of filling out a form for self-evaluation of class on a regular basis. The informal continuous contact

between teacher and enrollees in the classroom did not seem to be adequate as an evaluation session. Periodic "formal" evaluation sessions held with each enrollee may be useful for this purpose of setting goals and estimating the time required to achieve such goals. Another example of the need for more immediate reinforcement is the GED program. For enrollees whose test results indicate that they are ready to begin preparation for taking the GED test, the overall goal of completing all of the material and taking the exam may be too big a step. It might be broken into at least two, and perhaps four, sections to provide some intermediate goals and more immediate realization of achievement for the enrollees.

c) Motivation can be increased by relating the educational program to the immediate occupational and social needs of the student.

The Job Corps programmed instructional materials, despite their numerous advantages, are not successful if used alone in relating the educational, employment, and social problems of the enrollees. The educational program should be directly related to life and job requirements as a first step and extended only as the student can be challenged to achieve higher goals.

Educational programs for enrollees should be individually designed to include minimum skills for employment, followed by expanded and job-related learning experience through imaginative supplementation of the Job Corps programmed instructional materials. Finally, for the well-motivated student, a concentrated educational program should be available.

A Proposed Three-Level Model for Remedial Education

Three levels of remedial education should be available to enrollees. The first level should be compulsory and specifically related to the job the enrollee is to perform and should have the limited objective of improving his performance in a specific job. It should be his full-time assignment for a three-to-six week period prior to his first assignment, and in addition to basic education, should include relevant work procedures or work samples, family financial management, personal counseling to prepare each enrollee for employment, and career orientation and planning.

The second level of education should follow the general design of the ALE, should be voluntary, and should be directed toward a general remediation of the educational deficiencies of the enrollee. It should be offered in conjunction with work experience and integrates, to the extent possible, the work assignment and classroom work. Financial incentives should be offered and all enrollees with educational deficiencies should be encouraged to participate.

The third level of remedial education, concentrated preparation for the GED test, should be available for all those who are adequately motivated and who give an indication of performing at an achievement level high enough so that their educational deficiencies can be raised to the required level for passing the GED test within a reasonable time.

The rationale for conceiving of the NYC educational program on three different levels is that by starting with an educational experience which is specifically related to a job, it may be possible to show the relevance of education to work and encourage a greater proportion of the enrollees to participate in the higher level educational programs.

Teacher Training

While we found no evidence in the course of the research that certificated teachers performed any better than non-certificated teachers, we did find a need for pre- and in-service training of teachers. Perhaps the reason certificated teachers did not perform better is because conventional teacher-training curricula are not directed to the problem of using programmed instruction for teaching school dropouts and, thus, both the certificated and non-certificated teachers need training.

The training should be designed to acquaint teachers with new techniques for working with low income or poorly motivated students or students with special problems. Teachers should be counseled about the optimum use of programmed materials, the use of small group and other teaching techniques, and the use of supplementary materials. For example, a paper back library with topics of interest to minority groups can help maintain the interest of some students.

Teachers also need assistance in the identification and efficient use of community services and resources and how to benefit from them. One such resource is medical service. Medical problems which interfere with learning should be diagnosed and treated; and, if treatment is impossible and the student cannot profit from the classroom work, he should be referred to the community resource which can be of most assistance to him.

The proper administration and scoring of achievement tests and their use as a diagnostic tool is an essential part of pre-service and in-service training. Teacher training is needed to enhance the diagnostic value of the tests, to coordinate

the test results with the instructional materials, and to ensure the accuracy of the testing.

The training should be conducted through educational consultants, and meetings, and workshops of the teachers. The periodic meetings of teachers is particularly important because as remedial education decentralizes to serve work site clusters in various areas of the city, the isolation of the teachers placed in a decentralized site needs to be remedied by scheduled contacts with other teachers and counselors. Furthermore, in view of the lack of firm knowledge about the best ways of accomplishing the objectives of the teaching programs, some of the best resources for a teacher are other teachers dealing with problems similar to his own.

APPENDIX A

Workshop on Remedial Education for Out-of-School Youth--
Participants and Observers

Appendix A

WORKSHOP ON REMEDIAL EDUCATION FOR OUT OF SCHOOL YOUTH
April 16-18
Washington, D.C.

Participants and Observers

Dr. James Aven--Consultant, The George Washington University, Department of Education

Mrs. Jo Anne Ball--ALE Teacher, St. Louis, Missouri

Lester Bumbry--Job Corps Community Center, Washington, D.C.

Frenchie Chenault--ALE Teacher, (GED Program), Cincinnati, Ohio

Mrs. Shirley Cherkasky--Research Associate, Social Research Group

John A. Dell--Principle Teacher, Job Corps Conservation Center, Harpers Ferry, West Virginia

Bert Dressler--NYC Remedial Education Director, Durham, North Carolina

Robert Emmitt--Advanced General Education Program Manager, Job Corps, Washington, D.C.

Gerald J. Engel--ALE Administrator, St. Louis, Missouri

Charles Evans--MIND, Inc., Washington, D.C.

Wayne Flesch--NYC Counselor, St. Louis, Missouri

Mrs. Lillian Grigsby--ALE Teacher, Cincinnati, Ohio

Donald Hanger--Educational Director, Job Corps Community Center, Washington, D.C.

Mrs. Anita Hanley--ALE Administrator, Cincinnati, Ohio

Mrs. Alberta Johnson--NYC Counselor and former ALE Teacher, Pittsburgh, Pennsylvania

Mrs. Janet Johnston--Manpower Administration

Paul Jones--Coordinator, NYC, Pittsburgh, Pennsylvania

Mrs. Barbara Kemp--Senior Program Officer for Persons with Special Needs, Office of Education, HEW

Harry Lieberman--Department of Labor, Manpower Administration

Appendix A

John Liechty--ALE Teacher, Cincinnati, Ohio

Mark McGoff--Education Consultant, Job Corps, Washington, D.C.

William Mitchell--Assistant Coordinator, NYC, And ALE Administrator, Pittsburgh, Pennsylvania

Dr. Leonard Nadler--Consultant, The George Washington University, Department of Education

Miss Elzo Parnell--Former ALE Teacher, Cincinnati, Ohio

James Roberts--Teacher, NYC Remedial Education Program, Pittsburgh, Pennsylvania

Frank Singleton--Community Group Health Foundation, Washington, D.C.

Miss Anne Marie Staas--ALE Teacher, (GED Program), St. Louis, Missouri

Stephen Vaughn--New Careers Program, Durham, North Carolina

Dr. Regis Walther--Project Director, Social Research Group

Mrs. Betty Ward--Program Specialist, Manpower Services Section, Office of Education, HEW

Maurice Wells--Director, Job Corps Community Center, Washington, D.C.

APPENDIX B

Workshop on Remedial Education for Out-of-School Youth

Appendix B

WORKSHOP ON REMEDIAL EDUCATION FOR
OUT-OF-SCHOOL YOUTH

Time: April 16-18, 1969

Place: Conference Room, American Association of University Women Building
2401 Virginia Avenue, Nw
Washington, D.C.

Background: During the last year, the Social Research Group of The George Washington University and the sponsors of Neighborhood Youth Corps Programs in Cincinnati, Pittsburgh, and St. Louis have been conducting a remedial education experiment using Job Corps educational materials. The first concern of the experiment was to determine if programmed materials developed by the Job Corps could be used effectively by non-certificated teachers to improve reading and arithmetic skills of out-of-school enrollees. The experience of the last year has shown that the individualized character of the instruction places responsibilities on the teacher far different than those created by the conventional classroom and that guidelines and training resources need to be developed which will assist the teachers.

Purpose of the Workshop: Using as inputs the experience of last year and the advice of educational consultants, the workshop will attempt to develop guidelines for conducting an educational program designed to improve the reading and computational skills of school dropouts participating in work experience programs.

Participants: There will be about 30 Workshop participants, including:

a. Teachers and administrators from the three NYC programs using Job Corps materials.

b. Public school personnel

c. Research personnel

d. Educational consultants

e. Job Corps teachers and trainers

f. Representatives from the Department of Labor and other interested organizations

Discussion Topics: The Workshop will consider the following topics:

a. What are the advantages and disadvantages of programmed materials for teaching school dropouts?

b. How can students who are negatively conditioned to academic activities be motivated?

c. How can blocks in learning be diagnosed and remedial strategies evolved when the use of programmed materials does not keep the student moving forward?

d. How should classes be conducted to achieve the best results?

e. How can group methods be used most effectively in combination with individualized instruction?

f. Can teacher aides be used effectively?

g. What are the problems of achievement testing and how can these be minimized?

h. What types of incentives, both tangible and intangible, might be used effectively to increase motivation?

i. What should be the relationship between the teacher and the counselor and how can work experience and education be best coordinated?

j. How can discipline be maintained in a classroom conducted on the basis of encouraging each student to progress at his own pace?

APPENDIX C

Workshop on Remedial Education for Out-of-School Youth--
Discussion Topics

AREA I: HOW CAN TIME AND SPACE BE UTILIZED OPTIMALLY TO BUILD A VIABLE EDUCATIONAL COMPONENT?

Discussion Topic 1

A programmed learning system uses much more instructional material than is used in conventional classrooms. Thus, space must be available for storing the materials so that they are easily accessible and each student can select what he needs. Since students work at their own pace, the classroom must be large enough and arranged so that the students can work independently or in groups and have sufficient table space for their work.

a) How do you envision the ideal classroom space?

b) What is the most satisfactory way to store and display materials?

c) How are desks or tables to be arranged?

d) What is the teacher's most advantageous position in the room?

e) How can classroom environment motivate teaching and learning?

Discussion Topic 2

The Job Corps basic educational "kit" is designed to serve a maximum of thirty enrollees at one time. The classes should be large enough to make group discussions and other activities feasible and small enough so that the teacher has time to work with each individual if necessary during the class. This is usually defined as between nine and fifteen.

a) What is the optimum number with which a teacher can work effectively?

b) What other factors might affect the optimum class size?

c) Which is preferable -- two teachers working in one classroom with a larger number of students or two teachers each working in a separate classroom with a smaller group of students?

Discussion Topic 3

Classroom space within a worksite has been used in one city, and another city has classrooms near a cluster of worksites. Decentralization of classrooms appears to be more conducive to good attendance rates than a single central location because transportation problems are minimized.

a) What are the advantages of decentralization of classrooms? What are the disadvantages?

b) What are the effects of locating the classroom within one worksite?

c) What are the effects of locating near a cluster of worksites?

d) What are the effects of having one classroom site serve worksites all over the city?

Discussion Topic 4

A number of people with wide experience in remedial education and programmed learning have suggested that each class period should not be less than two or more than three hours long in order to afford the enrollee enough time to settle down to productive activity for a sufficient length of time to accomplish something tangible without extending the time to the point where he becomes bored and weary. The time may be divided equally between reading and math or each enrollee may make his own decision on where he should concentrate his attention.

a) How can we determine the amount of time an enrollee is able to work in programmed material before his interest flags and boredom sets in?

b) Does this maximum time vary or can a general rule be established?

Discussion Topic 5

A trial of a two-day per week three-hour session led to the conclusion by the teachers that the educational experience provided was not sufficiently frequent to result in any perceivable gains. To be kept in mind is the fact that many

enrollees have a problem of retaining what they learn from one class session to the next. It has not yet been possible to determine reliably what time of day is optimum for learning: before the work assignment, afterward, or between shifts. An added problem is that many of the work assignments are on a four-day per week basis while the educational classes may be meeting five days. At some worksites, the work days are shifted each week so that the remedial education teachers do not know whether the enrollee is absent because he is not scheduled to work or for some other reason.

a) What is the most satisfactory schedule for remedial education classes in regard to time of day and number of days per week?

b) Should attempts be made to have enrollees attend class before reporting to work assignments or after finishing work?

c) What arrangements should be made for the enrollee whose work assignment is four days per week?

d) What about the enrollee whose work days are rotated?

e) How frequently should those in the GED program meet?

f) What are the advantages and disadvantages of homework as an alternative to more frequent class meetings?

AREA II: CRITICAL EVALUATION OF THE JOB CORPS SYSTEM OF PROGRAMMED INSTRUCTION

Discussion Topic 1

After investigating several methods of programmed learning, the Job Corps system was selected for use in this educational experiment because:

a) it is a complete system which provides suitable materials for a wide range of achievement - from pre-reading and pre-math to GED readiness;

b) diagnosis and placement procedures are incorporated within the system so that students can enter the program at different levels and different times and proceed at their own pace. Flexibility is maximized to meet individual needs;

c) standardized training in the use of the instructional materials is provided for teachers, thus relieving the need for certification;

d) the system may be used without expenditure for hardware;

e) all printed materials, if used with transparent acetate sheets, are reusable.

The desirable characteristics of being complete, self-contained and flexible are accompanied by the problem of the material's complexity and sheer bulk. This creates some difficulties for the teachers who must gain a command of the system's hundreds of units if they are to be used efficiently and effectively.

a) Can the Job Corps instructional materials be simplified without interfering with their effectiveness? If so, how? If not, what do you recommend?

b) What procedure is to be followed if an enrollee is ready for another unit of work and the material is missing, misplaced, in use, or consumed?

c) Who shall be designated as responsible for keeping instructional materials in order -- teacher aides, enrollees who volunteer or are assigned, or teachers?

d) What are the advantages and disadvantages of using acetate sheets to conserve consumable materials?

e) What is the most efficient way for the teacher and administrator to be aware of what materials need replacement and to replace them promptly?

Discussion Topic 2

The Job Corps instructional materials are designed to provide complete coverage for basic education and preparation for the GED. There have been reports from teachers such as "the material doesn't offer enough 'whys and wherefores' and consequently knowledge gained is not transferable from one problem to another." Other teachers have reported that the programmed materials used in the basic education and GED classes tend to hamper the enrollees' ability to comprehend lengthy reading material. A third problem raised is the feeling among some of the teachers that most enrollees who complete the basic Job Corps curriculum still are not ready to enter the GED program, with the primary area of difficulty appearing in the area of reading comprehension.

a) Are there significant gaps in the materials? If so, give examples.

b) What means are available for bridging any gaps?

c) Can the Job Corps materials provide such means? How?

Discussion Topic 3

Although diagnosis and placement procedures and flexibility are characteristics of the Job Corps system, teachers have encountered problems in diagnosing blocks in learning and evolving remedial strategies when the programmed materials are not sufficient to keep the student moving forward. Occasionally an enrollee is inaccurately placed in the system at too high or too low a level. Placement above his level of achievement leads to frustration and failure; placement too low leads to boredom and lack of challenge.

a) How can students with special learning problems be diagnosed and provided with needed assistance?

b) What remedies are available for inaccurate placement at too high or too low a level?

c) What means should be used to solve a problem such as the enrollee who placed at Level 3 in reading but has trouble with spelling and pronouncing words?

d) What procedures should be used to deal with the problem of enrollee "cheating" on programmed material which leads to unit test failure?

e) Are there any standards to judge whether an enrollee is ready to take the GED exams other than the completion of the 120 books?

Discussion Topic 4

Although breaking the lock step approach of group instruction is one of the advantages of the Job Corps materials, their use on a completely individualized basis leads to virtual isolation of the students and a loss of the benefits available through student interchange of ideas. Some of the teachers have selected certain aspects of the material to be used by the total group in the classroom, but because of the great diversity in achievement, there are not many such units in which the total group can participate at any one time.

a) How can group methods be used most effectively in combination with individual instruction?

b) What other techniques may be introduced for working with small groups and total groups?

Discussion Topic 5

The Job Corps system appears to be adequate in providing basic educational materials but it needs to be supplemented; (a) the teacher has to know some additional approaches for helping the student whose learning problem is not solved by the programmed instruction alone; (b) the materials need to be brought to life; the routine approach of programmed instruction bores many of the students, particularly those with short attention spans; and (c) some relationship should be developed between what is learned in the classroom and the enrollees' lives.

a) In what ways should the programmed material be supplemented in order to increase interest and to provide alternative learning experiences when the student does not progress using the programmed materials?

b) What means are available, within the teachers' capabilities and within the resources of the community, to enrich and enliven the learning process?

Discussion Topic 6

There have been several attempts to expand the subject matter in the classes beyond reading and mathematics. Such efforts have been the outgrowth of students' requests and teachers' conceptions of ways to broaden and supplement the rather restricted educational bill of fare, especially in the basic education program. Some teachers have noted a need for language skill development, for spelling drill, and for social studies. Some students have requested material on the world of work and on black studies.

a) Should other fields of learning besides reading and math be added, given the limitations of time in the program? Can language skills be handled effectively? Black studies? World of work? Spelling?

b) If the amount of time per week is not increased, how can additional subject matter be included?

AREA III: BUILDING AND MAINTAINING RELATIONSHIPS

Discussion Topic 1

When the Accelerated Learning Experiment was begun, one of its primary concerns was to determine if programmed materials developed by the Job Corps could be used effectively by non-certificated teachers to improve reading and arithmetic skills of out-of-school enrollees. The experience of the last year has shown that the individualized character of the instruction places responsibilities on the teacher far different from those created by the conventional classroom. The materials do not teach themselves but require active participation on the part of the teacher.

Despite the fact that standardized training in the use of the materials is provided by the Job Corps, and there are teachers' manuals which accompany all of the students' workbooks, only a part of the teachers' total responsibilities are provided for by these means. On-going programs must be developed to assist the teacher in the most effective use of programmed instruction and in building and maintaining productive relationships with enrollees.

a) What training for teachers should be provided in effective use of programmed learning materials?

b) Is there a minimum level of competence needed by a teacher to handle various parts of the program? OR What are the minimal qualifications required for the teacher to handle various parts of the program?

c) What is the teachers' role: monitor, a catalyst, gadfly?

d) How much active participation by the teacher is required?

e) What type of pre-service training would suit the needs of teachers in this program?

f) What type of in-service training would suit the needs of the teachers?

g) What supportive services should be provided for teachers who are isolated from the usual educational context of school building and administrative staff?

h) Should the teachers be involved in or knowledgeable about the enrollee NYC work experience?

Discussion Topic 2

Other educational experiments have concluded that personal attributes of teachers in programmed learning should be given great consideration. The ability to relate to disadvantaged youth and a real interest in them as individuals appear to be essential to the progress in the classroom. A report from one of the Accelerated Learning Experiment sites states, "We strongly believe it is the teacher, not the materials, that make for a successful basic education program."

All of this emphasizes the careful line that the teacher must follow between an interpersonal relationship so informal that roles become confused and one too formal. A variety of techniques need to be devised for dealing with enrollees who are disruptive in the classroom setting or present special problems: hostility to authority, sleeping in class, discipline problems.

a) How can productive relationships be developed between the teacher and the individual student?

b) What techniques can be used for the student who is disruptive in the class?

c) What techniques can be used to counteract hostility to the teacher as an authority figure?

Discussion Topic 3

In a class conducted on the basis of encouraging each student to progress at his own pace, maintenance of group discipline poses special problems. It is clear that some standards for behavior must be established to which members of the group must adhere. But a learning group may need to have a different structure

than would be suitable for groups organized for other purposes.

a) How can productive relationships be developed between the teacher and the group?

b) To what degree should learning groups be structured or informally organized?

c) If standards for group behavior are set, who sets them?

d) Who is responsible for enforcing the standards on acceptable behavior, absenteeism, tardiness?

Discussion Topic 4

Within any group, organized for any purpose, cohesiveness may become a powerful force for influencing individual members. Lack of cohesion may evidence itself in intragroup conflict, disruptive behavior, teasing, destructive competitiveness. To compound the problem, fluidity of the enrollment leads to a group membership constantly in flux. Some of the teachers occasionally have reported instances of teasing and ostracism with which they were unable to cope.

a) What are the important factors in building group cohesion?

b) How can the teacher counteract disruptive and tension-producing behavior within the group?

c) How can group decision-making skills be developed?

d) What techniques should be employed to fit in the new enrollee and to phase out the terminee?

Discussion Topic 5

Many of the enrollees have little experience as participants in the larger community; neither they nor their family or friends feel themselves to be an essential part of the city, state or nation. Providing for experiences which give insight into the role of the individual in society should be a vital part of the classroom program.

a) What means should be used to introduce the enrollee to aspects of his community and government and to demonstrate his relationship to the larger society?

AREA IV: MOTIVATION OF ENROLLEES AND THE ROLE OF THE TEACHER IN GOAL-SETTING

Discussion Topic 1

Many enrollees, particularly males, have negative attitudes towards the school experience. Part of this negativism is associated with the enrollee's low estimate of his own ability to do school work, and with low thresholds of frustration and boredom. The rejection of schooling by dropouts also frequently means that the enrollee considers schooling to be irrelevant to his concerns. Thus the level of motivation to participate in further education is often low.

To arrive at appropriate standards of achievement which such students should be expected to meet presents grave problems. The instructor's and the student's evaluation and expectations of the latter may be vastly different.

a) Should there be an attempt to establish achievement standards?

b) Should such standards be set for the group or on an individual basis?

c) Should there be different standards for males and females?

d) Who is responsible for setting standards of achievement?

e) How shall such standards be established?

Discussion Topic 2

Various kinds of incentives have been used for motivational purposes. Most involve rewards and can be categorized as tangible and intangible, although some rewards meet both criteria. Some types of rewards are effective for a limited time and some for a long period of time. Rewards also vary in the number and categories of enrollees on whom they have an effect.

a) How can students who are negatively conditioned to academic activities be motivated?

b) What incentives actually are available to the teacher?

c) What are the intangible rewards? What are their advantages? Are they effective? Does their effectiveness differ between groups?

d) What are the tangible rewards? What are their advantages? Are they effective? Does their effectiveness differ between groups?

Discussion Topic 3

Slow learners present special problems in motivation because their rate of progress may be so slow as to cancel out any motivation derived from successful completion of work units.

a) What special techniques or incentives may be effective in motivating slow learners?

Discussion Topic 4

One persistent problem in measuring progress of students in any educational program is the difficulty of finding a good measuring instrument. Standardized tests are not recommended by their publishers for groups of low achievers and especially adults but there are no better tests available. The California Test Bureau cautions that in the use of the CAT, ". . . it is essential that in all uses and interpretations of test results that school personnel be aware of the mental or physical handicaps, the social and emotional problems, or the language difficulties which may limit individual performance and achievement."

In addition, it is difficult to control and standardize the testing conditions (time, place, and administration) and impossible to predict the enrollees' attitudes, motivation and physical condition at the time he is tested.

a) What are the problems of achievement testing and how can these be minimized?

b) Is independent testing an essential ingredient to measurement of progress?

c) What tests are suitable for measurement in the basic education program; in the GED program?

d) With what frequency can achievement tests be administered without promoting boredom in the subjects and active resistance to testing?

Discussion Topic 5

Motivation is also a concern in the administration of achievement tests. Enrollees may be overly concerned about taking tests and thus attempt to avoid them; they may perceive no relevance, be bored or annoyed by them, and therefore put forth little effort or react completely negatively.

a) What means may be devised to minimize adverse reactions to taking achievement tests?

b) What incentives are available for increasing motivation to strive on achievement tests?

AREA V: THE EDUCATIONAL COMPONENT: ITS RELATIONSHIP TO THE NYC AND ITS ULTIMATE GOALS

Discussion Topic 1

The educational component may be viewed as only one aspect of the NYC experience or it may be seen as its core. In either case every possible means should be explored to develop a close relationship between the two. Upgrading the educational achievement of the out-of-school NYC enrollees is vital to making them job-ready but an educational program without a clearly evident tie to employment will have little appeal for the enrollees.

a) Is it possible to arrange the selection of work stations and time scheduling of enrollees around the educational component?

b) How can work experience and education best be coordinated?

c) Can teacher aides be used effectively as NYC work assignments? How?

d) Can the educational component contribute to the general effectiveness of the NYC by becoming an added attraction or is it a deterrent?

Discussion Topic 2

There have been several experiments in coordinating the roles of teacher and counselor. In one city, NYC counselors have been used as teachers but the counseling has continued to be supplied at the various worksites. In another city, a classroom at the worksite has used close cooperation between the teachers and the counselor at that site. However, little has been attempted yet in completely combining the roles of teacher and counselor, thus separating the counseling from the worksite. This no doubt is related to the difference in emphasis on worksite experience and remedial education experience.

There are obvious advantages, from the standpoint of the remedial education program, in having the teacher also serve as counselor, but the effect this arrangement

would have on worksite problems has not been tested.

a) What should be the relationship between teaching and counseling?

b) How much counseling should the teacher do -- is this a dual role?

c) Should teachers be involved in or knowledgeable about the enrollee's NYC work experience?

Discussion Topic 3

Cities with manpower training programs usually have a variety of remedial education programs for dropouts and adults, both within and outside the regular school system. The degree to which these programs supplement and complement each other varies.

a) How does the NYC educational program fit into the community?

b) How can community resources be utilized in the educational program?

c) How can the educational program contribute to the community?

Discussion Topic 4

A salient characteristic of the NYC enrollees who enter the remedial education program is their wide range of academic achievement. Some of them are pre-readers; others are nearly ready for the GED test. For the latter it may be only a short period of time before they have reached their goal of a high school equivalency diploma, and have been replaced in the remedial education program by another enrollee. But for those who are functionally illiterate, the educational program will be much more extended. An ultimate goal of the GED may seem a very distant possibility, perhaps requiring more time than his entire NYC contract.

a) What are the goals of the education model? Are there short and long range goals?

b) What are the goals vis a vis the enrollee?

c) Should passing the GED be a goal for every enrollee regardless of his entry point in the program, or should goals be individually set depending on each enrollee's occupational aspiration?

d) How many enrollees should the educational component strive to serve?

APPENDIX D

Career Counseling Interview Form

APPENDIX E

Bi-Weekly Enrollee Report

Appendix E

NEIGHBORHOOD YOUTH CORPS ACCELERATED LEARNING EXPERIMENT

BI-WEEKLY ENROLLEE REPORT

To provide a continuous record of each enrollee's interest and progress within the program, this bi-weekly report should be completed by the Teacher-Counselor every other Friday for the preceding two-week period. Please include any informative data that you feel will increase our understanding of the enrollee's general attitude and achievement.

Enrollee's Name: _____

Reporting Period: From ___/___/___/ to ___/___/___/
Mo. Day Yr. Mo. Day Yr.

Number of Days in Attendance: _____ Total Hours of Attendance: _____

Number of Days Absent: _____ Number of Times Tardy: _____

Instructor's evaluation of enrollee's attitude: (CIRCLE)

Excellent 1 2 3 4 Unsatisfactory 5

Instructor's evaluation of enrollees' progress: (CIRCLE)

Excellent 1 2 3 4 Unsatisfactory 5

Comments on enrollee's achievement and behavior. (Please elaborate on your evaluative ratings above):

_____ _____
(Date) (Teacher-Counselor)

(If more space is needed, use back of page)

APPENDIX F

Bi-Weekly Classroom Report

Appendix F

NEIGHBORHOOD YOUTH CORPS ACCELERATED LEARNING EXPERIMENT

BI-WEEKLY CLASS ROOM REPORT

This report should be completed by the teacher-counselor every other Friday for the preceding two-week period. It is important to the research that information be obtained from each teacher-counselor about his experience with the program, including the problems he has encountered and the solutions he has attempted. The information will be useful not only for the evaluation of the program but also for an exchange of ideas among different programs.

Name:_____ City:_____

Reporting period: From ___/___/___/ to ___/___/___/ Number in class:_____
Mo Day Yr Mo Day Yr

Describe any problems you have encountered with the educational materials during this reporting period:

Describe any difficult disciplinary problems you have encountered and the methods you used to deal with them:

Have you used any new techniques to motivate students or maintain their interest? If so, describe:

Have you used any educational material to supplement the standard Job Corps curriculum? If so, describe:

Any other comments on the program:

(If more space is needed, use back of page)

APPENDIX C

Criteria for Experiment

Appendix C

Priority List

I Locate two adjacent classrooms at or near the work site for mid-January occupancy. (Please see section on classroom requirements.)

II
1. Select someone to serve as administrator or to be responsible for the program.
2. Begin recruitment of two instructors, plus at least one substitute instructor, for mid-January date. (Please see section on teacher recruitment.)
3. Order materials for instruction, including Reading and Mathematics Manuals for teachers.
4. Notify Job Corps of Teacher Training sessions.

III Distribute reading and math manuals to teachers.

IV
1. Teachers visit nearby Job Corps Centers for a day's observation of procedures.
2. Teacher training in Pittsburgh for all three sites -- Four day's training in both math and reading by Job Corps consultants.

V Classes begin with enrollee testing for placement.

VI Teachers mail in initial reports on enrollees

VII Teachers mail in first monthly report on enrollees, termination reports and initial reports for new enrollees.

Remedial Education Administration

1. A program administrator should be selected to work on a part-time basis only.

2. He should have training and experience in adult education or a related field. Desirable characteristics are flexibility, a willingness to experiment, ability to supervise and train others, administrative skills.

3. His responsibilities should be:
   a. to recruit and hire teachers and substitutes
   b. to be available for consultation with teachers
   c. to supervise teachers' work
   d. to see that reports are submitted on time and in proper form
   e. to do in-service training of teachers when necessary

Classroom Facilities: Suggested Minimum Requirements

1. The classroom space provided should be at or near the work site, in order (a) to dissociate the remedial education program from the regular school system; (b) to relate it directly to job training; (c) to provide realistic and immediate motivation to improve basic education skills; and (d) to provide a "status" setting for remedial education.

2. Two classrooms will be needed, each with enough space for tables and chairs for 12 or 13 enrollees, a table or desk for the teacher and book shelving or tables for materials and books.

3. Seating can be flexible and informal. It is recommended that tables be arranged in a circle or some other than the usual rigid rows. Desks can be used if there is adequate writing space. Chairs with writing arms usually do not provide enough work space to be satisfactory.

4. There should be work and storage space for the teacher. A desk or table and chair are the usual equipment.

5. Book shelving will be needed which is accessible to students so that they may select their work materials themselves. At least eighteen feet of shelving or table space should be provided to store reading and math workbooks, texts, dictionaries, graded reading materials and advanced reading materials. Another bookshelf should be used for storing enrollees' notebooks between classes.

6. Other minimum requirements for the classroom:
   a. A locked file cabinet for storage of tests and placement materials.
   b. Storage space for extra materials: a locked closet or cupboard.
   c. Adequate light - 50 foot candles.
   d. Sanitary facilities accessible to classrooms.
   e. If necessary, materials can be stored elsewhere than in the classroom, and moved in and out as needed, perhaps on a rolling cart.

7. Materials needed:
   a. A 3-ring notebook and paper for each enrollee.
   b. Pencils
   c. Wastebaskets

8. Optional materials:
   a. Ashtrays if smoking is permitted.
   b. Coffee pot, paper cups and other supplies, or access to dispensing machines (Not required but recommended)
   c. Blackboard, chalk, erasers.

Time Scheduling

1. It is strongly recommended that classes meet every day, Monday through Friday. It is not recommended that programmed learning extend beyond two hours at one time. Therefore, the optimum arrangement would be for each class of 12 or 13 enrollees to meet once each day for two hours, resulting in ten hours of remedial education per week.

   Preferably enrollees would attend the Remedial Education Center for two hours before beginning their daily work program. If this can't be arranged for all the enrollees, the two hour period at the end of the work program would be another possibility. Also to be investigated: the possibility of a split-shift work program.

2. This means that each Center would have four groups of 12-13 enrollees, two groups meeting with their teachers for one two-hour period; the other two groups meeting with the same two teachers for another two hour period.

3. The two hour period might be broken into two 45 minute sessions with a thirty minute break midway. (See #5 under Curriculum). It is suggested that instructors use this thirty minute period creatively with such possibilities as an occasional joint meeting of both groups with their instructors.

4. If instructors are trained in administering both the reading and the mathematics programs, each enrollee may set his own pace and be more flexible in allotting time to each subject as dictated by his needs.

5. In scheduling class meetings, care should be taken to avoid conflicts with enrollees meal times. Also to be avoided is any great time lapse between class and work program. One of the advantages of using the work site is to make it easier for enrollees to attend remedial education classes without additional cost for travel.

Teaching Staff: Recruitment and Training

1. A minimum of two instructors will be required at each remedial education site. It is recommended that instructors be selected on the basis of the following criteria: interest in the program, personal warmth, motivation, flexibility, understanding, patience, maturity and ability to become involved positively in such an undertaking.

   In addition, teachers should have had (a) some experience in working with groups similar to NYC enrollees, (b) at least two years of college or junior college, if possible, and (c) some education courses. The latter is desirable but not essential if other criteria are met. Personal attributes should be

given more consideration than educational background. A teaching certificate should not be a requirement. However, it should be kept in mind that teachers without education training may need more initial support, more supervision, and in-service training than would teachers who have a degree or at least some background in education.

2. Teachers will have four days of pre-service training in the use of Job Corps instructional materials and must be able to attend the training session in Pittsburgh and to visit the Job Corps Center nearest their city for one day to observe teaching procedure, before beginning their jobs.

3. Each teacher will be responsible for and should be able to work effectively with two classes of 12 or 13 enrollees, each meeting for one two-hour period per day. This is a total of four hours per day of classroom time plus record keeping duties for the math and reading materials. Since the instructional materials are programmed, work with enrollees ordinarily will be on a one-to-one basis as each enrollee works at his own pace, needing only occasional help and checking from the instructor.

   Since there will be a certain amount of careful record-keeping required, teachers must be willing and able to keep such records and to submit them at regular intervals to their supervisor and/or the Social Research Group office.

4. A second, but no less important, function of the teacher is to serve as counselor to those enrollees in his remedial education classes.

5. A casual style of dress and an informal manner in the classroom are recommended by experienced Job Corps teachers.

Curriculum and Instructional Materials

1. It is recommended that in the initial stages of the program, the curriculum be limited to only reading and mathematics, for administrative simplicity.

2. Instructional materials will be Job Corps programmed materials, including work-books, dictionaries, progress checks, tests, etc. The Job Corps system of using the materials will be utilized.

3. Materials for each Remedial Education Center will range from those appropriate for the pre-reader and pre-arithmetic enrollee to beyond the 7.5 grade level. (See attached list) Supplementary materials prepared for the Job Corps will also be available.

4. The key to programmed learning success is adequate testing and placement at the appropriate level. Placement testing materials and training to use such materials will be supplied by the Job Corps.

5. A third component of the program should be a 30 minute informal group meeting midway through each instructional period. This might serve several possible purposes:
   a. As a device for building peer-group relationships and instructor-enrollee relationships.
   b. As a coffee break in the total period of programmed learning.
   c. As an opportunity for the development of verbal skills among enrollees.
   d. As a period for group counseling, or group discussion of enrollee problems, world of work matters, etc.
   e. As an opportunity for some social studies course work - political socialization.

6. The reading program is divided into three groups: beginning, graded and advanced. Each group is composed of a number of levels through which enrollees advance at their own speeds.

7. The mathematics program is upgraded, but contains ten series of programmed texts, each of which is broken down into a number of units, through which enrollees progress.

8. Individual progress from one unit to the next will be contingent upon successfully completing specific progress checks.

Data Collection

1. Social Research Group will develop and supply the following:
   a. A manual for teachers which outlines procedures for handling emergencies, making out reports, setting up classes, scheduling, and other administrative details.
   b. Forms for attendance
   c. Individual progress report forms
   d. Methods of continuous evaluation of program success and student progress
   e. Questionnaires or interview schedules for pre-enrollment and termination

APPENDIX H

Problems of the Research Design

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Problems of the Research Design

In an experiment such as this, where a number of people are involved and data are being gathered continuously over a number of months, the research design presents five major problems: how to secure the cooperation of those at the research site so that the experiment will be carried out as designed; how to retain in the program the group to be studies for a sufficient length of time so that adequate information about them can be obtained; how to retain the teaching staff for the duration of the experiment so that the experiment has some stability; how to insure the continual supply of complete data; and how to obtain or develop some satisfactory method of measuring achievement or progress through the program.

The first problem, which involves to a great extent the conflicting demands of the work assignment and the educational component for the enrollees' time, was dealt with by recognizing the impossibility of uniformity of the experiment among the three sites, and certain adjustments were made in the original design. Eventually the results of the deviations from the design led to greater effort being made toward following the design more closely in Phase II.

The second problem, retention of the enrollees for a sufficient length of time, was never resolved satisfactorily and analysis of data had to be limited to the relatively small group which did remain in the program for the duration of Phase I. It was foreseen that the combination of voluntary terminations due to lack of interest, involuntary termination due to incarceration or overwhelming personal problems, and the built-in termination mechanisms of work site transfer or permanent employment upon job-readiness would create problems in

maintaining a study group of adequate size. In addition, the turnover in enrollees necessitated constant efforts to recruit, test, and place new members in the classes. Unless the enrollees are drawn from one or only a few work sites, this involves dealing with a number of NYC counselors, and is exceedingly time-consuming.

Preventing turnover in teaching staff was not possible; one of the sites had to make one replacement and a second site lost four of its original six teachers. It can be expected that any change in teaching staff will be reflected by some changes in the program, whether intentional or not.

Insuring a continuous and uniform supply of information on a fluid enrollee population is difficult under the best of circumstances but since teacher reports supplied a large part of the data, discontinuity in teaching staff led to a number of additional problems in obtaining complete and uniform data on a regular basis.

The fifth problem, that of finding an adequate device for measuring progress, was the most difficult because although a standard measure, the California Achievement Test was used, neither teachers nor research staff had any great confidence in its validity for this particular population. This feeling is reflected in a report from one of the counselors:

> We have been using the California Achievement Tests as an indication of progress for a long period of time now and I tend to feel that they are losing their effectiveness. I really question how valid they are and if they are giving a true indication of the enrollees' ability. The enrollee almost naturally takes a negative attitude towards the test even before he begins. In most every case this would cause the score to be lower. Could we look into the possibility of some different form or type of test? Preferably shorter by about half the time. Normally this testing as it is now will take approximately two class periods.

The CAT is not designed for young disadvantaged out-of-school adults but for school pupils whose age, grade and achievement level are more synchronized. The use of any achievement measure assumes that the testees will be motivated, even anxious, to do their best. It also assumes that the test will appear relevant and that its results will seem important to the testees. It is not likely that any of these assumptions are dependable. We were unable to discover any other standardized measure of achievement, however, that promised greater usefulness than the CAT.

APPENDIX TABLE 1

Termination Conditions, Male and Female Subjects
Who Did Not Complete First Six Months,
By Time of Entry Into ALE and By Site

Appendix Table 1

TERMINATION CONDITIONS, MALE AND FEMALE SUBJECTS
WHO DID NOT COMPLETE FIRST SIX MONTHS,
BY TIME OF ENTRY INTO ALE AND SITE

Conditions and Sites	Male Subjects			Female Subjects		
	Original	Later	Total	Original	Later	Total
Cincinnati		Number			Number	
Passed GED, HS diploma	0	0	0	1	2	3
Employment, School, Training, Military	15	2	17	1	1	2
Moved, NYC transfer, or completion	5	4	9	1	4	5
Health, personal circumstances	1	0	1	0	1	1
Jailed	3	1	4	0	0	0
Failure to adjust, quit, absenteeism	7	7	14	3	0	3
total, Cincinnati	31	14	45	6	8	14
Pittsburgh						
Passed GED, HS diploma	3	0	3	2	0	2
Employment, School, Training, Military	12	0	12	2	0	2
Moved, NYC transfer, or completion	1	0	1	2	0	2
Health, personal circumstances	1	0	1	6	1	7
Failure to adjust, quit, absenteeism	7	3	10	1	2	3
total, Pittsburgh	24	3	27	13	3	16
St. Louis						
Employment, School, Training, Military	0	0	0	3	4	7
Moved, NYC transfer, or completion	2	0	2	6	2	8
Failure to adjust, quit, absenteeism	5	1	6	4	2	6
total, St. Louis	7	1	8	13	8	21
TOTAL	62	18	80	32	19	51